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FOR THE

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AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

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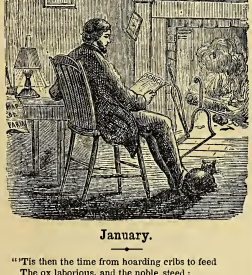


January.

"'Tis then the time from hoarding cribs to feed
The ox laborious, and the noble steed;
'Tis then the time to tend the bleating fold,
To strew with litter, and to fence from cold;
The cattle fed, the fuel piled within,
At setting day the blissful hours begin,
'Tis then, sole owner of his little cot,
The farmer feels his independent lot;
Hears with the crackling blaze that lights the wall,
The voice of gladness and of nature call;
Beholds his children play, their mother smile,
And tastes with them the fruit of Summer's toil."
HUMPHREYS.

The new year will, we trust, open not so badly, as some anticipated. There has, indeed, been calamity among merchants, some failures, and a great taking in of sail all around, some distress and short work among manufacturers in the early part of the year, but good prospects at the close. We shall always be a trading people, doubtless, but henceforth, we are to make more of our own goods. The debt being incurred by the war indicates a high tariff for many years to come. Almost every thing raised upon the farm, has ruled lower, but the demand has been steady, and the pay fair, especially for grain. Immense quantities of European gold have come into the country—more, probably, than ever flowed hither in a single year before, and it is now lining the farmer's pocket. He has the metal in his purse, and with many it is entirely a new sensation. The farmer was never more encouraged in his work. Manufacturers will be brisk supplying the hungry market, when the war is over, and that will make a brisk demand for all the farmer's crops near home. The world must have breadstuffs, fruits, beef, pork, cheese, and butter, and while grass grows and water runs, farmers can raise them.

Farmer Hardy is meditating upon these things, as he sits by his Winter fire, after the day's work is done. You see the blaze of his hickory wood, the lamp upon his table, the pile of agricultural books and papers, the pen and inkstand, and the cat purring and dozing at his feet. Like a sensible man, he does not keep dogs—does not believe in them—but believes in sheep. You see he looks amazingly comfortable, though a snow storm is raging without. What does he care. He is PLANNING THE CAMPAIGN for next season. You see farmer Hardy is a middle aged man, and has a good deal of experience in cultivating the soil. He has a great many proverbs at his tongue's end, and you can not talk with him five minutes without hearing some of these pithy sayings. One of these is, "*take time by the forelock.*" He is doing that now, and making all his arrangements for the whole year. He has learned that he can raise better crops, and make money faster, by laying out his work beforehand. He finds that his brain work by lamp light pays well in connection with the work of the muscles in the corn field, or in the meadow. He has a map of his farm, with every fence, gate-way, pond hole, muck swamp, orchard, and woodland laid down. He knows the enemies he has to contend with—rocks, water, brush, weeds, vermin, and how to marshal his forces, so as to overcome them. He is getting his guns and ammunition ready, and drilling his forces for the great struggle next Spring, and Summer. This planning decides between profit and loss, defeat and victory, in the year's operations.

He has no fields that are growing poorer, and running out. He enlarges his plans a little every year, and finds that the soil honors all drafts that he makes upon it. Another of his pithy sayings is, "*more manure,*" and you will find he has planned to make seven hundred loads this year. He wants five hundred for his hoed crops, and two hundred to spread upon his grass land in the Fall and Winter. He will make one hundred in the sty, two hundred in compost heaps out where he is to plant corn, and four hundred in his barn cellar and yard. This involves the carting of a good deal of muck and peat, of which he has always on hand a large quantity, dug a year before. When the ground is frozen, and the wheeling is good, his teams are all busy with the carting. When it rains or snows he has always work on hand in the barn cellar, or under the sheds, spreading muck and making compost. He hires his laborers by the year, so that they are never out of a job, and have no time to learn bad habits at the store or tavern. There is no difficulty with him in planning profitable work all the while.

He has been increasing the quantity of manure to the acre for several years, and finds he has not reached the limit of profit at fifty loads to the acre. He began with twenty loads, and finds that his corn costs less per bushel with fifty loads, than with twenty. Having five hundred loads of manure for plowed land, he will plant only ten acres to corn, but will get about eighty bushels to the acre.

Farmer Hardy has waked up to the value of roots, the last two years, and he has laid out two acres for field beets and carrots. Cattle do much better upon a variety of food, and a few roots every day give a relish to every thing else, and help digestion. He will tell you "*the proof of the pudding is in the eating,*" and point to his cattle as standing arguments in favor of root culture. Tell him that roots are "nothing but water," and he will answer you, "they are beef, veal, milk, butter, and cheese."

He not only goes in for manure and roots, but for draining land now useless. He has been draining swales and wet land, for ten years, and has now several miles of tiles and stone drains earning money for him under ground. He finds nothing like them to rout the enemy, water, and to make manure tell. His Winter grain is not winter-killed, on drained fields, and the grass is much heavier, and lasts longer. He is marking another field for drainage this year.

Another of his proverbs is, "*like produces like,*" and you will find he is making out a list of seeds now, for the field and garden. He knows what he has saved pure, and what he must buy, to get the best results from the season's campaign. He carries this maxim into his stock, and by judicious selection, has added twenty per cent to the annual yield of his cows, in butter and cheese. He has improved breeds of cattle, cows, sheep and oxen, pigs and poultry. He takes prizes at the fairs, and feels comfortable.

Farmer Hardy, with his planning and thinking these stormy winter nights, is a thriving, happy man. He never has a bit of the blues, for he knows just how he stands with the world, and how much he adds to his capital every year. He is not scared by gloomy prospects in the future, poor crops, winter-kill, cattle disease, or heavy taxes for the war. He knows that he makes his campaigning pay against rocks, weeds, water, brush, and other foes, and has no doubt that Uncle Sam is smart enough to vanquish all his enemies, and gain money and muscle by the exercise. With these comfortable convictions for himself and his country, he is likely to have the HAPPY NEW YEAR, with which we cordially salute all our readers.

Calendar of Operations for Jan., 1862.

[A glance over a table like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 38° to 45°; but will be equally applicable further North and South, by allowing for latitude. —The calendar will, of course, be much more full during the season of active field and garden work.]

Farm.

Winter is the Farmer's seed-time for ideas. When the labors of the year press, and the mind is oppressed with the daily and hourly details of farm work, and the management of hands, many an idea occurs to one which he must wait until Winter to develop and inform himself upon. His mind may then be freshly enriched from books and contact with other minds, and is in a fit state for the profitable development of the thought-germs gathered during his season of labor.

Agricultural Reading—Place at least one good farmer's paper, better three or four, upon your center table in the sitting room. Encourage every member of the family to read. Keep a pleasant fire, bright light and quiet there, so that every one may read who will. The little it costs will be a most profitable investment. Buy rather those books which treat thoroughly of one subject, than those which profess to contain a little of almost every thing in small compass.

Barns—Protect roots against frost, if you have them stored in the barn cellar. Pack the hydrant in strawy horse manure, which is best done by placing a headless barrel around it and then filling that. Look out for slippery spots in the cattle walks, and especially near gates or doorways; cover the ice with earth or ashes, but never put on salt—unless you remove it *all*. Now, if ever, should every thing be in its place and the whole barn neat and clean.

Cattle—Feed no more than you can keep well. Give good bedding to all. Keep milch cows and fatting cattle still; they need little or no exercise. Young stock and working oxen should spend some hours daily in the open air unless it is very stormy, but when stabled, should be warm and comfortable. Never feed on the ground, but in racks. Cattle kept in yards, (a poor practice at best) should have roomy and warm sheds. Provide if you can lumps of rock salt for cattle to lick when they please, otherwise, salt them once a week. If you suspect lice, rub a little unguentum (mercurial ointment) mixed with lard, behind the horns, and tie up for some days. Feed roots finely sliced; turnips first, beets, mangels, and ruta bagas by and by. Beef animals need the assiduous care of the *owner* now more than at any other season.

Cellars—Air well on warm, moist days. Keep clean and watch the appearance of fresh rat holes, all of which close with broken bottles and cement mortar.

Dairy—Color winter butter with carrots fed to the cows.

Eaves and Eave-spouts—Clear of leaves, etc., on thawing days, if not done, that the cistern may not lack water.

Farmers Club—Start one at once, if you have not one now, and attend one at any rate if there are not more than three members. Have no secrets, the smallest kind of men have the most.

Fencing stuff—Get out, and haul when you have good sledding, at least a third more than you think you can use.

Fodder—Cut up coarse fodder, wet it, salt it, sprinkle enough oil-meal or slip-stuff on to give it flavor, and let it stand, stirring occasionally till well soaked and mixed. All kinds of stock will eat it. Use no worthless fodder except in the manure heap.

Frost—Sprinkle a handful or two of salt around posts likely to be heaved by the frost, picking out the ice to the ground, in a little groove close to the post. What ever is frozen and liable to injury by frost, thaw very slowly; put vegetables or apples into *ice cold* water.

Fuel—Cut fuel without stint, and be ready to haul what is cut as soon as there is fair sledding.

Granary—Thrash and get all grain into an airy, dry, rat proof granary as soon as possible. Many a farmer loses enough grain by rats and mice to winter a horse. Mice and rats multiply rapidly if they have anything to live upon—employ all help to get rid of them. A cat is an excellent thing in the barn, but keep her out of the granary, unless she is very well colored. Corn keeps best on the ear; if it is to be fed out this Winter *shell* it as soon as you please; if you are to keep it into the Summer leave it on the ear.

Hemp—Break, and bale up for market in dry weather, this month and next.

Horses—Keep well shod and sharp. Be very careful to blanket horses when they are warm. Give liberal bedding, and the best of care to the breeding mares, taking special care that they do not fall in slippery weather, if long with foal. Break colts, and subdue fractious colts or other horses by the Rarey method, when there is a foot of soft snow on the ground. Feed carrots in small quantities, 4 quarts a day, to all classes of horses.

Harnesses—After being wet, wipe and oil them thoroughly before they dry. Have all harnesses overhauled, and put in good order.

Ice—Get out ice in the coldest weather for then it is dry. Set the cakes on their edges, and if possible pack them in the ice house in early morning when the temperature is near or below zero. The first formed ice is best.

Implements—Think up what new ones you want, and find out which are the best kinds.

Manure—Make it under cover. Do not let it freeze even, if it can be helped. This is the manure harvest and as much should be gathered as possible. Compost with muck or earth. Save *all* the liquid manure, and every thing about the house or barn that has the principle of decay in it. Keep the manure heap moist, compact and level. If it touches the outside of any building clear it away at once, smooth over the scars, and apply grafting wax or waxed cloth to keep out the rain from cracks.

Market produce as soon as there is good sleighing or hard roads; prices are now somewhat remunerative. Look up various kinds of manufacturers' wastes leather chips, etc., for return loads. Sell grain by sample, warranted, with the privilege of delivering it at your own time, if you can do so.

Plowing—We can occasionally do some plowing in January. Do it if you can make good work.

Poultry—Give them warm, dry, sunny, well whitewashed quarters, clean straw in the nests, a good feed of grain once a day, and once a day boiled and mashed potatoes and scraps from the table, with occasionally "scraps" from the frying pot too, and *unchilled water*, or a trough of running water to drink and you will not lack eggs. Keep an ash box in one corner always dry and dusty, and throw in fresh ashes or lime now and then.

Roads and Paths—Open the roads after snow storms. Out upon the man who lets his neighbors open his road for him! A snow plow for one or two horses after every snow should draw its furrows 4 feet wide through the whole neighborhood, and thus neighborly intercourse will be established, the children can go to school, and the women can get out to the prayer meeting, which otherwise might be for several days.

Sheep—If sheep have good shelter they "know enough to come in when it rains." Never expose them, give them the range of a good large yard—not of the open field—fold them nights, let the buck run with the ewes now for June lambs. Give fatting sheep most careful attention. Watch the first symptoms of disease.

Sink drains, etc., are apt to freeze up—prevent it.

Swine—Fat hogs should have been killed and packed or marketed last month. If that job is still on your hands have it done with at once. Keep growing pigs at work in the manure heap—and encourage activity with an occasional handful of corn. Give breeding sows warm nests, plenty of litter, and good feed, but not of a fattening character. Send sows to the boar for May pigs.

Timber, Wood lots—Do not cut trees so as to leave tall stumps. Cut with reference to young and growing trees. If you have timber or bark to draw out from swampy ground, employ the first opportunity after the ice will bear your team.

Tools if not greased will be likely to rust; attend to this, and to any repairs they may need. Make up a lot of rake teeth, and hay caps, and other things which you will need next Spring or Summer.

Orchard and Nursery.

The present month offers to nurserymen and orchardists an opportunity to put things to rights; to fit up buildings conveniently, and to do many things about their places which they will neglect, or half do in the hurrying season, when the frost is leaving the ground, and customers are clamorous for trees.

Grafting—Root-graft young trees in-doors,—best in a good cellar, where neither grafts nor roots will dry. Never graft on *pieces* of root.

Implements are to be renewed; provide a good stock, mending old and purchasing new ones.

Insects—The eggs of certain insects laid upon the bark are easily discovered now. Let no good orchardist fail to make himself acquainted with them, and destroy as many as he can. Read Fitch's Reports. In warm weather the wingless millers of the cankerworm come from the earth, and should be destroyed.

Labels—Provide an abundance both of wood and zinc. Lead labels are very convenient for the orchard, and may be cut and stamped with numbers or names at this season.

Mice—Stamp down snow close about trees in young orchards—or otherwise defend them against depredation.

Scions may be cut whenever we have a warm "spell," bury them in slightly moist earth or sand—not moister than good soil in Summer; tie up and label accurately.

Surface Drainage—Hard rains coming upon partially frozen ground often do great damage by washing off the surface, if good superficial drainage is not provided.

Stakes—Work out new, to supply the place of those which failed last year. Make them stout and of good stuff, and by all means soak them in a solution of a pound of blue vitriol to 12 quarts of water. They will last five times as long.

Trees too large to be moved in Spring may be transplanted in Winter by digging about them so that the mass of earth in contact with the roots may become a frozen ball, 6, 8, or even 10 feet in diameter, and capable of being moved with the tree. Prune severely before moving, but leave the large limbs so that they may be cut again in Summer to secure well healing scars.

Winds—Tie up to prevent danger from winds when possible, and when it occurs, remove broken trees and branches at once, smooth over the scars, and apply grafting wax or waxed cloth to keep out the rain from cracks.

Kitchen and Fruit Garden.

Lay out spring work—with the vegetable gardener this often begins quite actively next month.

Cold Frames—In very cold weather give extra cover, but remove on warm, sunny days. A good blanket of light snow is worth more than any thing else. See that they do not get damp for want of ventilation, and rot the plants. Give light and air freely in warm weather.

Cuttings of Currants and Gooseberries may be taken in mild weather, and stored in sand. See page 19.

Draining may be pushed in open weather, whenever, indeed, there is neither too much frost nor too much water in the soil. See full chapters in last volume.

Grape Vines, if not already pruned and laid down, may now be attended to. Protect by covering with hemlock boughs. Never handle them while frozen.

Mushrooms—Prepare beds in any place free from frost.

Poles and Pea-brush—Cut and prepare for use, stacking them under cover. It pays well to soak the ends, if not the whole of bean poles in blue vitriol water to preserve them.

Prune fruit trees with the *knife only* this month.

Rhubarb—Force, last of the month, by heaping strawy and heating manure over the crowns; protect well if the weather afterward becomes severe.

Seeds—Buy in time to test every doubtful sample; it saves vexation and many dollars. It is best done by counting the seeds and sowing them in good soil in pots kept under hand glasses, in a warm place, and counting the number that germinate.

Vegetables in the cellar will continue to arrive at perfection, and need care only that they do not freeze or rot. Let them have air on warm days.

Flower Garden and Lawn.

The time is invaluable for reading and getting information. There is little to be done. After, or during heavy snow storms, shake the snow from the evergreens and other trees loaded with it. In warm weather, if the frost is coming out, let the rose pits, (cold pits under sashes where half-hardy plants are kept,) without letting in the sun; so long as they remain frozen, let them alone. The frost can seldom be entirely excluded. If the earth in the pots becomes *very dry*, give a very little water.

When the frost is out of the ground, deep spading brings insect pupæ to the surface, and they are thus destroyed in great numbers. Give the fowls a chance at them if you can.

Borders not yet protected may be covered with light strawy manure, leaves, evergreen boughs or the like. It seldom happens that injury occurs to half-hardy plants of any kind before the "January thaw," or other period of continued warm weather.

Green-House.

Keep the temperature below 60°, and if possible above 35°. Plants which will not bear the least frost, ought not to be kept in a Green-house adapted to oranges, lemons, oleanders, camellias, myrtles, azaleas, roses, etc. Give good ventilation on mild days, and water sparingly, always with reference to the state of the plant, increasing water, warmth, and light, when it begins to grow, or approaches blooming. In the green-house force nothing. Stir the soil in the pots and remove dead leaves. If lice appear, make all tight, smoke thoroughly, and syringe affected plants afterward. When oranges and lemons begin to grow, wash stems with strong soap-suds and crush scale insects.

Protect by mats or shutters on cold nights, and more than all else avoid dampness.

Bulbs—Tulips, hyacinths, crocuses, etc., etc. Pot and keep in the dark and away from the heat till well started; water freely. Hyacinths in glasses or moss, should be treated in the same way. Start them slowly. If already growing, remove them to the hot-house or conservatory.

The description of a "Sixty Dollar Green-House," on page 20 (of this number), will be found worthy the attention of a great number of our readers. Such a house will afford room to start a great number of plants, for transplanting early to the garden.

Hot-House and Conservatory.

In the Hot-house flowering and ornamental plants are propagated and brought to perfection; and in the Conservatory they are placed for show and to minister directly to the enjoyment of the family and guests. Here maintain an atmosphere of uniform moisture and warmth—never allow a drying heat, a scorching sun, or frost. Sprinkle freely those plants whose blossoms are not injured by water. Use, occasionally, liquid manure quite dilute, until plants begin to stop blooming. It gives them vigor, and they feel the change from the hot-house less. Keep growing plants close to the light, and turn frequently. Remove plants at once when their beauty has gone, when they begin to grow much, or when you discover insects or mildew.

Hot-house — Avoid extremes of temperature; this must be graduated according to the class of plants, the degree of forcing, amount of moisture, etc. Admit air through the upper ventilators to avoid drafts.

Cuttings of various plants may now be profitably started, viz: roses, verbenas, petunias, fuchsias, geraniums and the like. See page 19.

All growing plants and those coming into bloom require much moisture, and all the light they can have. Water regularly, sprinkle frequently, but avoid excess.

Pines require the warmest and moistest atmosphere, and should have a separate house or room. Cucumbers force admirably in the same apartment at this season.

Look out for insects; use sulphur for red spider, tobacco smoke for aphides and thrips, tobacco water and soap-suds for scale-bugs, etc.

Keep the soil in pots stirred, and shift growing plants so often that they will receive no check.

Grapery and Orchard-House.

Cold Graperies and Orchard-Houses will need no attention this month, except to maintain them at a uniform and moderately low temperature, and guard against dampness and injury from mice. If there is danger from dampness lay lumps of quick-lime about, say a bushel lump under each vine or tree. In houses where a moderate heat is employed, it is still early to lift the vines, and prepare the trees for fruiting, except where a succession of crops is desired; in this case, for the earliest crop, lift the vines, tie them to the rafters, and give inside borders or tubs a good watering with liquid manure; increase the heat and keep it at 45 to 50°—seldom higher—never let it fall to freezing; dampen the floor and wall by sprinkling.

Peaches and Apricots—Treat much the same as above. They will bloom in 15 to 20 days.

In forcing houses, the vines and fruit trees may be in any or all stages of development, and it is impossible to give particular rules; they demand the constant thought and care of the gardener.

Mildew—Whenever mildew appears syringe with water containing sulphur, or lay sulphur on the brick flues.

Apiary in January.

Prepared by M. Quinby—by request.

Bees properly housed, need but little attention; an occasional examination to see that all is right may be made, going among them quietly that they be not unnecessarily disturbed. If mice or rats have found their way into the hives, it may be known by the combs having been nibbled. Traps temptingly baited, seem to be the best remedy. It would be dangerous to use poison to destroy them, as it might be communicated to the honey.....Stocks standing in the open air, when secure from the mice, may be covered with snow through all the severe weather. It will effectually protect the bees from frost. If the hive is only partially covered, or a little around the bottom, it should be removed, keeping the air passages free. Ice, snow, or wood often accumulate about the entrance and smother the bees. In severe weather, allow the sun to strike the hive. When just moderate enough to tempt the bees out, and cool enough to chill them before they return, shade the hive by setting a wide board before it. When the day is very fine, allow them to fly, except in case of new fallen snow. If the frost at any time leaves the hive, it may be raised and all dead bees and filth brushed out. When all is right, do not disturb them in severe weather.

Seeds for Free Distribution to all Subscribers for 1862 (Vol. 21.).

Keery subscriber to the Agriculturist for 1862, is invited to select four or five packets of seeds from the list below.

These seeds are all valuable. Of the 90 kinds offered, many are *new* varieties, but we include several common useful sorts for the convenience of those living remote from access to good seeds.

Most of them are annuals (reproducing seed the first season), and in all cases there will be enough to yield a good supply for future use. Our aim is, to furnish the germs of future abundance in each locality where these seeds go.

Many of these seeds have been grown by ourselves, the past year; the others are obtained of the best growers in this country and Europe. The distribution will begin early in February. A description is given in the next columns.

Mode of Distribution.—The seeds may be called for at the office after Feb. 10, or be applied for by mail at any time; they to be forwarded when ready. The postage is only **1 cent per ounce under 1500 miles; and 2 cents per ounce when over 1500 miles.**

Those sending for seeds to be forwarded by mail, will please *carefully* observe the following

DIRECTIONS—(1). Select from the list below, any four or five parcels desired, and write *plainly* on a slip of paper the *numbers* and *kind* of the kinds of seeds wanted. Certain numbers are used on our seed drawers, seed bags, etc.)

(2) Enclose the slip in a prepared envelope—printed in full to your own address, as here shown, and put upon it postage stamps to the amount of **one cent** *for* **each ounce** *of seeds to be enclosed*, if to go **under 1500 miles**, or **two cents** if to go **over 1500 miles.** (Most places East of the Mississippi river are over 1500 miles.) **N.B.**—The total amount of stamps required can be reckoned from the table of seeds below. Any fraction over even ounces will need an extra 1c. or two 1-cent stamps according to distance. Forward the above prepared envelopes to this office, and the seeds will be enclosed therein, and to the numbers on the enclosed slip. To save letter postage, let there be *no marks on the enclosed envelope* but the number of stamps. About 3 ounces will go in a common sized envelope.

John Smith,
Illinois.
Monroe County.

Field, and Vegetable Garden Seeds.

No.		Weight of package.
183	Mammoth Long Bearded Spring Wheat	1 pound.
3	Improved King Philip Corn	One or two ounces.
141	Mammoth Early Sweet Corn	About one ounce.
186	Evergreen Sweet Corn	About one ounce.
98	Long Red Mangel Wurtzel	About one ounce.
187	Com. Broad Leaf Tobacco	About one-eighth ounce.
188	Connecticut Seed Tobacco	About one-eighth ounce.
191	Mammoth Millet	About one-half ounce.
189	Common Spring Wheat	About one ounce.
190	Negard Barley	About one ounce.
5	Daniel O'Rourke Pea	About one ounce.
9	Champion of England Pea	About one ounce.
99	Prince Albert Pea	About one ounce.
12	Early Red Flat Turnip	About one-fourth ounce.
13	Fulfield Market Cabbage	About one-fourth ounce.
143	Early Purple (Vienna) Kohl Rabi	About one-fourth ounce.
192	Improved Stonemason Cabbage	...one-fourth ounce.
193	Red Dutch Cabbage	About one-fourth ounce.
64	Extra early Round Turnip Radish	one-fourth ounce.
150	Early Purple Cape Cauliflower	About one-fourth ounce.
147	Neapolitan Cabbage Lettuce	About one-fourth ounce.
73	Imperial Brussels Sprouts	About one-eighth ounce.
101	Improved Long Orange Carrot	About one-half ounce.
148	Long Blood Beet	About one-half ounce.
149	Extra early Bassano Beet	About one-half ounce.
85	Hubbard Squash, pure	About one-fourth ounce.
193	Fejee & Italian Red Tomato	About one-eighth ounce.
154	Ice-cream White Egg Tomato	About one-eighth ounce.
7	Improved Netted Musk Melon	About one-fourth ounce.
194	Hollow Crown Parsnip	About one-fourth ounce.
96	Curled Parsley	About one-fourth ounce.
151	Yellow Danvers Onion	About one-fourth ounce.
152	Large Cheese Pumpkin	About one-eighth ounce.
17	Best Strap-Leaf Turnip	About one-fourth ounce.
71	Long White French Turnip	About one-half ounce.
195	Early Short Horn Carrot	About one-fourth ounce.
102	Early Mohawk Bean	About one-half ounce.
103	Sage	About one-eighth ounce.
196	Summer Savory	About one-eighth ounce.
157	Long Prickly Cucumber	About one-eighth ounce.
166	Green Curled Kale	About one-fourth ounce.
198	Improved Purple Egg Plant	About one-eighth ounce.
24	Wilson's Cherry	About one-eighth ounce.
197	Linnæus Rhubarb	About one-half ounce.

Flower and Ornamental Seeds.

89	Cotton Plant (2 kinds, mixed)	One-half ounce.
114	Castor Oil Bean	One-half ounce.

On an average any **five** *of the following varieties will go under one 1-cent stamp, (or two stamps if over 1500 miles.)*

200	Fancy Gourds, (mixed	212	Pine Sweet Peas, (hh.)
201	Scarlet Chinese Egg Gourd	124	Whitlavia, (hh.)
202	Animated Oats, (hh.)	213	Cardytah, (hh.)
177	Quaking Grass, (a.h.)	214	Balloon Vine, (hh.)
203	Mixed Nasturtium, (hh.)	183	Sweet Alyssum, (hh.)
204	Mixed Sweet Peas, (hh.)	215	Eccremocarpus Vine, (hh.)
33	Portulacca Mix'd, (hh.)	175	Mixed Salpiglossis (hh.)
31	Phlox Drummondii, (hh.)	216	Acroclinum Roseum, (hh.)
205	Double French Marigold, (hh.)	50	Mixed Schizanthus, (hh.)
206	Golden Straw Flower, (everlasting) (hh.)	49	Eschscholtia Californiea, (hh.)
208	Crimson Globe Amaranth, (everlasting) (hh.)	213	Xeranthemum Annum (hh.)
210	Convolvulus Tricolor, (hh.)	125	Standing Cypress, (h)
173	Mixed Larkspur, (hh.)	43	Foxglove, (hh.)
107	Malope Grandiflora, (hh.)	209	Dwarf Blue Larkspur, (hp.)
211	Fine Mixed Lupins, (hh.)	171	Forget-Me-Nots, (hh.)
215	Eccremocarpus Vine, (p.)	127	Long tubed Centranthus, (hh.)
216	Acroclinum Roseum, (hh.)	214	Balloon Vine, (hh.)
213	Xeranthemum Annum (hh.)	125	Standing Cypress, (h)
126	Long tubed Centranthus, (hh.)	43	Foxglove, (hh.)
214	Balloon Vine, (hh.)	209	Dwarf Blue Larkspur, (hp.)
125	Standing Cypress, (h)	171	Forget-Me-Nots, (hh.)
43	Foxglove, (hh.)	215	Eccremocarpus Vine, (p.)
209	Dwarf Blue Larkspur, (hp.)	127	Long tubed Centranthus, (hh.)
171	Forget-Me-Nots, (hh.)	216	Acroclinum Roseum, (hh.)

* (hh.) hardy annual; (hh.), half hardy annual; (h), tender annual; (hh.), half hardy biennial; (h), tender biennial; (hp.), hardy perennial; (hhp.) half hardy perennial; (p.), tender perennial.

Descriptive Notes upon the Seeds in our List for free Distribution in 1862.

We devote considerable space to a condensed description of the 90 varieties of seeds named in the preceding column. These notes will afford some information upon the character and cultivation of the several plants, where ever the seeds may be obtained, and they should be preserved for reference in the Spring planting season More full directions for the culture of these and other plants will, of course, be given from time to time, in separate articles. The Calendar of Operations, from month to month, will also suggest the time of sowing or planting. Most of the field seeds are necessarily in too small quantity for a crop, but with a little care in culture each parcel will produce a fair supply for a good sized crop the next year. Our seeds will not be ready for distribution at all before the first or second week in February, of which information will be given in the next paper. But we desire to now get in all applications (as per preceding columns) at the earliest moment possible, that we may be able to arrange the supply in proportion to the demand.

For brevity, the *Numbers* are always used in putting up and sending out seeds, and subscribers are particularly desired to note this in their application. To avoid confusion, we use a new number for each addition, dropping the numbers of any seeds previously offered, but not retained in this list. The additions of the present year number from 183 to 215, all the seeds numbering from 2 to 183 belonging to previous lists.

Field and Garden Seeds.

No. 2.—Improved King Philip Corn.—A rapid growing, 8-rowed sort, larger than the old King Philip, both in the stalks and in the ears; when pure, of deep brown color and heavy. It ripens with us in 95 to 100 days from planting—in drills scant 3 feet apart, and kernels dropped 10 inches asunder. We have been so pleased with it in the previous two years that we last Spring planted **3 acres** for this year's distribution. It may be planted later than the common varieties and further north.

No. 8.—Daniel O'Rourke Pea.—An early sort of fair quality, grows 2 feet high, and may be eaten in 40 to 45 days from planting. Sow from first to last of April, according to climate, or any time in May to multiply seed.

No. 9.—Champion of England Pea.—A later, tall-growing variety. We want nothing better than this sort, which is our chief dependence for a table pea through the season. Sow as No. 8, or at intervals until middle of July, if seed is plenty.

No. 12.—Green Whole Kabi, or Cabbage Turnip.—The bulb, which resembles a turnip, grows above ground like a cabbage. Plant early in May, the same as turnips, and for table use boil the bulbs when still tender. They acquire a toughness if kept till Winter. This is coming largely into use for cattle and sheep, in England.

No. 13.—Enfield Market Cabbage.—We have already distributed this 3 years, and it is liked so well that we offer it again. It is a quick-growing sugar-loaf variety, sweet and tender. Sow in hot-beds early in April, or in open ground the last of April or early in May, and plant out 18 inches apart, in the rows.

No. 17.—Red Strap Leaf Turnip.—A very quick growing variety of the flat or Dutch species, with a red-dish or purple top. They are good for the table, while growing, and for stock during Autumn and early Winter. Sow with drills from the first of April to September.

No. 21.—Winter Cherry (*Physalis viscosa*).—Called also, Ground Cherry, Cape Gooseberry, etc. This grows wild in some places, but not so large fruit as when in cultivated soil. The fruit grows in capsules, is about the size of common cherries, when ripe is liked by many persons, eaten raw, and makes a fine preserve if done up with a little sugar and some lemon juice. The fruit will keep through the Winter in any cool room. We grow it every year, and it is so well adapted to new countries where there is no other fruit, that we replace it in the seed list. Sow early in Spring, the earlier the better, as the seed frequently lies in the ground until June. When once started it grows rapidly, and a single plant covers four to five feet in diameter, in rich soil.

No. 64.—Early Turnip Radish.—A quick-growing round sort, crisp and sweet. Sow at any time after frost is out in Spring, and at intervals until September. If the early sowings are allowed to go to seed, a second crop may be raised from this seed the same season. It always reproduces seed the first year.

No. 65.—Curled Parsley.—Sow at any time in May,

for Summer use, or in August for transplanting to cold frames or boxes for Winter. Cover lightly with fine earth.

No. 71.—Long White French Turnip.—This is of the form of the rutabaga, but is white, very fine, sweet flavor. May be sown at all seasons for table use. For Winter use and feeding, sow early in July, and during the month.

No. 72.—Brussels Sprouts.—Button cabbages, growing singly or in clusters upon a cabbage stump. Sow and cultivate as cabbages, using the small heads for boiling. They are more delicate than ordinary cabbages.

No. 74.—Solid White Celery.—Sow in hot-bed in April for early or in open ground during May or June for late crop. See chapter in type for this or the next *Agriculturist*. The blanched stalks are eaten raw, with meats, etc.

No. 76.—Skillman's Netted Muskmelon.—So called from its rough skin. A round, sweet, and rich sort, with green flesh. Plant as Watermelons.

No. 95.—Hubbard Squash.—The best *Winter* squash we have tried. Keeps until Spring. Plant middle of May. Color dark green to light blue, hard shell, with rich dry flesh. It is also good for Autumn use.

No. 96.—Long Red Mangel Wurzel.—A large stock beet, sometimes reaching 15 to 20 lbs. in weight. It is much raised in England, and is valued highly for feeding. Produces immense crops, from 25 to 30 tuns per acre. A Connecticut correspondent, (page 362 Vol. 19) reported 36 tuns or 7200 bushels on an acre. Sow last of April, or early in May, on a deep rich soil, in drills 2 feet apart, and when well up thin to 1 foot in the row.

No. 99.—Prince Albert Pea.—An early English sort, growing about 3 feet high. Has proved very good with us, in two years' trial. Sow same as No. 8.

No. 101.—Improved Orange Carrots.—A fine yellow variety, suitable for the table or for stock. Sow early in May, on deep, rich soil, in rows 15 to 18 inches apart.

No. 102.—Sage.—A small bed should be in every garden. Sow at any time in May, in rows one foot or more apart, covering less than half an inch. The perennial roots will yield two pickings each season.

No. 141.—Darling's Early Sweet Corn.—We have tried many other early sorts, but come back to this, as combining sweetness, and rapid maturity. It is quite small in stalk and ear, and may be planted in hills or drills 2 to 2½ feet apart, unless other crops are put between the rows to occupy the ground after this is out of the way, which will be before mid-summer if planted early. It may be planted all Summer for a succession, among early cabbages or potatoes.

No. 145.—Flat Dutch Cabbage.—A Winter sort, extensively grown for market, frequently under the name of "drumhead." The heads are large, and require to be 2 feet apart, in 2½ feet rows.

No. 147.—Neapolitan Cabbage Lettuce.—A large solid sort, which has proved valuable. Sow at any time in April, May, or June, covering lightly. Leave sufficient plants for seed, which is reproduced the first season.

No. 149.—Early Bassano Beet.—A fine, quick growing, turnip shaped sort, for early use. Sow in drills one foot apart.

No. 150.—Early Paris Cauliflower.—One of the best sorts. Has a white, solid flower. It has given good satisfaction to most of those who have received it from our former distributions, and we reintroduce it—knowing nothing better. Sow and treat every way as cabbages.

No. 151.—Yellow Danvers Onion.—A large, flat onion which commands the highest market price. Sow last of April on a warm soil in rows 10 to 12 inches apart, covering lightly.

No. 152.—Large Cheese Pumpkin.—Acknowledged the best for general culture. A large, flat, cream colored variety, sweet, and good keepers. Plant middle of May, allowing ample space for them to run.

No. 154.—Ice Cream Water Melon.—One of the best sorts, sweet and tender. Plant in open ground about the middle of May, and can be started earlier in hot-bed.

No. 156.—Summer Savory.—A well-known, and unusually aromatic herb. Sow in April or May; cover lightly.

No. 157.—Long Prickly Cucumber.—A much commended sort. Plant at any time in May or June and keep watch for striped bugs as for all cucumbers.

No. 184.—Long Blood Beet.—A good tender sort for the table during Autumn and Winter. Sow middle to last of May in light, deep soil, in rows 1½ foot apart.

No. 185.—Bearded Spring Wheat.—A very excellent wheat which we found growing in a field in Westchester Co., N. Y., last year. The berry was as plump and fair as the best of Winter Wheat, and the yield large. It seemed to be specially worthy of introduction and trial elsewhere. Our parcels, planted or sown in drills, in April or May 1st, will furnish a fair supply for next year.

No. 186.—Evergreen Sweet Corn.—A much larger variety than No. 141, a slower grower; not quite so sweet; remains in the milk state a long time, hence called evergreen. Good for later table use, and for fall drying. If to be ripened for seed, plant early; for table use, from May 15 to June 20, in hills or drills 3½ to 4 feet apart.

No. 187.—Connecticut Seed-Leaf Tobacco.—Offered in response to many inquiries. The seed is so small that it is better to mix it with earth or mold, and sprout it by keeping warm and moist for 2 or 3 days. A thimble full of seed will furnish plants for an acre. Sow in a sheltered seed-bed about the middle of April, and plant out middle of June, on rich dry soil, 3 feet apart each way, or 3½ feet by 2 feet to facilitate working with a horse hoe. For after treatment see future articles on Tobacco.

No. 188.—Havana Tobacco.—Treat as No. 187, save that it requires less room—say 2 feet each way. Keep the ground well stirred and free from weeds.

No. 189.—Spelt, or German Wheat, called also "Dinkel," is little known in this country; and, owing to numerous inquiries from our German subscribers, we have imported a quantity for distribution. Sow early in Spring, as ordinary Wheat. It will flourish on common soil. For a full description, see page 104, vol. 19.

No. 190.—Nepaul Barley.—A curious sort, illustrated on page 361, last volume (September No.). It puts from its hull the same as rye, and is said to yield a heavy crop. Sow early in May—in drills, to obtain the largest results from a little seed.

No. 191.—Mammoth Millet.—An annual, very productive in seed and foliage. Cut green, it makes good hay, or left to ripen, the straw is good, and the seed valuable for stock and poultry. Sow thinly half an inch deep, at any time in May.

No. 192.—Stone Mason Cabbage.—A solid cabbage, very good, of compact form, and keeps well. We tried it last year, and like it much. Sow and treat as No. 145.

No. 193.—Fejee and Italian Tomatoes.—Large, smooth and solid varieties, the best we have grown. Sow in hot-bed, April 1st for early, or first of May in open ground for later.

No. 194.—Hollow Crown Parsnep.—A large, long and sweet variety, with a depressed crown. Sow in deep, rich soil, early in May, in rows 18 inches apart, covering lightly. Best after being left in ground over Winter.

No. 195.—Early Short Horn Carrot.—A fine yellow variety for early table use. Sow in light soil last of April or first of May, in drills 1 foot apart, covering lightly.

No. 196.—Green Curled Kale or Borecole.—A kind of cabbage which does not head. The whole top is boiled for greens; usually in Spring, as it bears standing out over Winter, with (and often without) a slight covering of straw or brush. Sow from April to June, and treat the same as late cabbages.

No. 197.—Linnæus Rhubarb.—Sow in deep mellow soil in April or May, covering ½ inch. Keep well hoed, and transplant the following Spring when a few stems may be pulled for cooking. A full crop can not be had until the 3d year, on which account it is better to purchase and plant roots at once when they can be had. It furnishes a fine material for early sauce and pies, and should be in every garden.

No. 198.—Purple Egg Plant.—There are many fanciful sorts, but this is the most approved variety for general culture. Sow in a hot-bed, early in April and plant out 18 inches apart, the middle of May, or after all danger of frost is over. It is still better sown in, or transplanted into small pots, keeping them under glass till June, when the whole may be transfered to the soil, without disturbing the plants.

No. 199.—Red Dutch Cabbage.—Highly valued for pickling and for "cold slaw." Heads small, sugar loaf form, and solid. Set plants 15 to 18 inches apart each way. Its color is fancied by most persons.

Flower and Ornamental Seeds.

No. 23.—Mignonette (*Reseda odorata*)—An annual in this climate. The flowers not conspicous but yield a rich odor. Its habit is low, branching upon the ground; flowers profusely from midsummer until frost; may be potted for winter blooming. A great favorite. Sow as early as the ground can be worked—the seed is long in coming up.

No. 25.—Mixed Nasturtium (*Tropæolum majus, in var.*).—This peculiar plant is very showy in flower, and the fruit, a green capsule, is highly prized for pickling. The common varieties are rambling and delight to climb over fences, bricks, rough stone walls, etc. Others are dwarf and bushy. Sow in May and thin to one foot apart in single rows. Annual.

No. 27.—Cockscomb (*Celosia crestata.*)—A very curious and common annual, native of the East Indies. Flowers in fantastic, irregular spikes, inclining to the fan-shape, like the comb of the cock, and of the richest crimson color. Sow in rich soil, early, and thin to 18 inches apart.

No. 30.—Tassel Flower (*Cacalia coccinea*).—Called also "Venus Paint Brush." A delicately beautiful annual, growing 1 to 2 feet high, and blossoms freely. The scarlet flowers are little perfect tassels, very bright and pretty. Sow in May and thin out or transplant to 6 or 10 inches.

No. 31.—Chinese Pink (*Dianthus Sinensis*).—A very pretty little annual of this fine class, most of which are perennials treated like an annual. It is not fragrant like the Sweet William, nor does it grow in clusters. Color varies from maroon and crimson with pink edging, to white with a red center. They flower for many weeks in succession, and are desirable in every flower plot. Sow in early Spring. The roots frequently survive the Winter.

No. 32.—Portulaccas, mixed (*Portulacca splendens, in var.*).—Low growing annuals, fleshy leafed and spreading upon the ground like purslane. Flowers of various brilliant colors. May be sown at any time and will continue in flower, until cut down by frost.

No. 33.—Cypress Vine. (*Quamoclit vulgaris.*)—One of the finest annual climbers, with delicate feathery foliage and bright trumpet shaped flowers. It will climb a string or other support 12 to 18 feet in a season, and is a fine plant to train in a cone shape around a central stake. Soak the seed for 12 hours before sowing and only put it in when the ground is warm. Sow May 1st to June 1st, according to the locality.

No. 37.—Zinnias, (mixed) (*Zinnia elegans*).—This beautiful Mexican plant is a brilliant addition to the flower garden. It is tall, elegant and showy, with flowers of many colors, purple, crimson, orange, scarlet, violet and white. Sow middle of May, keep plants 18 inches apart.

No. 40.—Eschscholtzia (*E. californica.*)—Annual or biennial plants with orange-colored tulip-shaped flowers, very showy. Sow in May, or earlier, in hot-beds and transplant. Sometimes called California poppy.

No. 42.—Foxglove (*Digitalis alba, purpurea, etc.*).—A perennial, blooming the second year from seed. The flowers are very pretty, often beautifully mottled with purple and brown spots. They grow 2 to 4 feet high and flower upon a spike beginning at the bottom, and continue in bloom for several weeks. The medicine digitalis is obtained from the leaves and seed of this plant. Sow in early Spring. The roots often die out after flowering a year or two.

No. 49.—Candytuft (*Iberis umbellata, and amara.*)—Suitable for massing or for borders. An annual with clusters or umbels of small flowers, of various colors from pure white to purple. Grows 6 to 12 inches high, and blooms most of the season. Sow early in Spring.

No. 50.—Schizanthus (*S. pinnatus, in var.*).—Beautiful annuals, with yellow, purplish or scarlet flowers. Sow in May, or earlier, in open ground.

No. 51. Phlox Drummondi (*Phlox Drummondii.*)—A very beautiful annual, the delicate flowers of which exhibit a very great variety of marking. Grows 12 to 18 inches high, requires little care, blooms constantly and is beautiful in masses. Sow early in May.

No. 89.—Cotton Plant (*Gossypium herbaceum and hebadaticum*).—The Upland, with a little Sea Island Cotton Seed, both in the same package—the Upland downy, the Sea Island naked. The Upland, sown in the Spring, and protected from frost, will mature its bolls in the Autumn, south of 40° or 41°, and *bloom* wherever corn will grow. The plant grows 3 feet to 5 feet high; the flowers are showy—bright yellow, with purple eye. Sow at corn-planting, in drills, and thin to 18 inches apart.

No. 111.—Castor Oil Bean (*Ricinus communis*).—A stately plant, 5 to 10 feet high, with broad tropical foliage, which is showy and beautiful. It is a very rank grower, and needs a rich, warm soil. Sow in the open ground, and leave 2 to 3 feet apart.

No. 122.—Canterbury Bell. (*Campanula medza.*)—Showy, pretty biennials, flowering the second year from seed, and sometimes living 3 or 4 years. They bloom along a spike 2 to 3 feet high; flowers of perfect bell shape, large, and in some varieties double; white, lilac, blue, and intermediate shades. Sow at any time in May or June, and transplant in the Fall to 1 foot apart in rows, or set in groups.

No. 123.—Gilia (*G. nivalis.*)—An annual of 1 foot in hight, delicate growth; white or variegated flowers, growing in panicles, and finely divided leaves. Good for massing. Sow early in Spring.

No. 124.—Whitlavia (*W. grandiflora.*)—This new California annual pleases us much, blooming 5 to 6 weeks from sowing, and continuing in flower until October. Its blue, bell-shaped flowers resemble the campanulas. Sow

early in May, and thin to 6 inches apart, as it only attains a hight of 1 foot.

No. 125.—STANDING CYPRESS. (*Ipomopsis elegans*—regarded by some as a *Gilia.*) A very beautiful biennial. The foliage and habit is feathery and delicate, the flowers rich scarlet, borne on a spike 1 hight 2 to 4 feet. Sow in Spring and slightly protect in Winter; blooms all July and August.

No. 126.—LONG-TUBED CENTRANTHUS (*C. macrosiphon.*)—An annual of rather delicate appearance, but hardy and desirable. Flowers fascicled, (in bundles or clusters,) tubular, borne on stalks 10 to 12 inches high. Continues in bloom until frost. Sow early in Spring, and thin to 6 inches.

No. 127.—LARGE FLOWERING MALOPE (*Malope grandiflora*).—A fine annual of the mallows family, 2 to 3 feet high, with large rosy crimson flowers, blooming from June to October. Sow in May, one foot apart in rows.

No. 128.—SWAN RIVER DAISY (*Brachycome iberidifolia.*) —A very pretty annual of dwarf habit, growing 6 to 8 inches high, with dark blue, pink and white flowers which open from July to September. Sow early in Spring.

No. 129.—BEAUTIFUL CLARKIA (*Clarkia pulchella.*)—A hardy, Rocky Mountain annual of decided beauty, growing 1 foot high. Flowers, light purple, opening from June to September. Sow last of April or first of May. A good border flower.

No. 171. FORGET ME NOT (*Myosotis palustris*).—Low growing perennial with delicate flowers in clusters of light blue color, with white or yellow eyes. Blooms the first season. Sow in early spring. Flourishes in good, somewhat shaded, garden soils, but delights in moisture.

No. 173.—MIXED LARKSPURS (*Delphinium consolida.*) Annuals of white, rose, pink, blue, and variegated colors, growing from 2 to 3 feet high. Some of the species are double and very pretty. Flowers in spikes for a long time in succession. Sow very early, as the seeds lie long in the ground; they are very hardy.

No. 175.—MIXED SALPIGLOSSIS (*Salpiglossis atropurpurea, atrococcinea, azurea*, etc.)—Originally from Chili, where they are perennials, but with us they are annuals, sown early in frames and afterward planted in the open ground. Flowers beautiful, of various colors.

No. 177.—QUAKING GRASS (*Briza gracilis*).—A beautiful nodding grass, growing 2 feet high. The heads or panicles resemble the rattles of the rattlesnake, and dry so as to be very ornamental in bouquets of dried flowers. Sow in early Spring.

No. 182.—SWEET ALYSSUM (*Alyssum maritimum.*)—An annual, nearly 1 foot in hight, flowering in long racemes, from June to November, or until killed by frost. Sweet-scented; flowers white. Sow in early Spring, and thin to 1 foot apart, unless massed, for which it is well suited.

No. 183.—IMPROVED FRENCH AND GERMAN ASTERS.—A beautiful, hardy annual; see description and mode of culture, on page 16. Many of our own plants furnish more beautiful and perfect blooms than those there shown. Owing to the limited production of seed in perfect flowers, our parcels must be small if the demand is large, although we have saved for distribution all that ripened on a quarter acre.

No. 200.—FANCY GOURDS (*Lagenaria vulgaris, in var.*) —Cultivated for the singularity or beauty of the fruit; vines climbing. Plant like cucumbers, near a trellis, or provide poles; protect against insects.

No. 202.—ANIMATED OATS (*Avena sensitiva*).—A large oat-like grass; the seed very hairy, having long, strong, twisted and bent crosses (or beards), which revolve and twist when they become damper or dryer. They are effected by the warmth of the hand, and both look and move like insects. Sow May 1.

No. 203 and 204.—GERMAN AND FRENCH POPPIES (*Papaver somniferum and Rhœas fl. pl.*).—Of this common yet very showy species there is an infinite variety in form and color. The culture is simple. Sow in beginning of Spring, thin out to several inches apart: bloom in July.

No. 205.—DOUBLE FRENCH MARIGOLD (*Tagetes patula fl. pl.*)—A very showy annual of 2 to 3 feet high; flowers bright yellow to dark brown, and often beautifully striped and margined: of fine form. Sow beginning of May: blooms from July to frost.

No. 206.—GOLDEN STRAW-FLOWER (*Helichrysum bracteatum, etc.*)—One of the most common of the *immortelle* or everlasting flowers; flowers yellow, white, pink and scarlet. Grows 2 or 3 feet high. Sow upon borders in May. Pick flowers before expanded, for Winter bouquets.

No. 207.—SWAN RIVER IMMORTELLE. (*Rhodanthe Manglesii.*)—One of the most delicate and beautiful of annuals; a foot high, branching habit. The numerous silvery buds expand to starry, rose-colored, fadeless flowers. Sow the light seed shallow in sandy loam. It is very pretty grown in pots. Sow in May, and leave 1 foot apart.

No. 208.—GLOBE AMARANTH (*Gomphrena globosa*).—One of the fadeless flowers, regarded as emblems of immortality. It grows 1 to 2 feet high. The flowers are in globular heads, ½ to ¾ in. diameter. Sow as early as the soil is warm, and protect from frost, or better sow in the hot-bed in April and transplant to the garden in May.

No. 209.—DWARF BLUE LARKSPUR (*Delphinium formosum.*)—A fine herbaceous perennial, usually with branching stems 1½ inches high; flowers ultramarine blue, very rich; continues in bloom from July to September. Sow early in May.

No. 210.—DWARF MORNING GLORY (*Convolvulus tricolor*).—A very showy annual, growing 14 to 20 inches high; the funnel shaped flowers, blue, white and yellow. Sow early in May. Blooms from June to October.

No. 211.—FINE MIXED LUPINS (*Lupinus*).—The lupins comprise some of our most showy border flowers, and there is a great variety comprised in several botanical species. The pea-shaped flowers grow in spikes or clusters, and are of yellow, blue, white, pink, and other tints. Sow very early and thin, or transplant 6 inches or 1 foot apart. The more delicate varieties do best sown later. Middle to last of May.

No. 212.—SWEET PEAS (*Lathyrus odoratus.*)—A familiar annual, valued for the remarkable sweetness and beauty of its flowers. Its habit, mode of flowering, etc., is much like the garden pea, but it is much more delicate. The flowers are of many bright colors, (red, white and blue,) beautiful in bouquets.—A great favorite. Sow early, in good soil, seeds 2 inches apart; requires brushing; grows 2 to 6 feet high.

No 213.—IMMORTELLE (*Xeranthemum annuum.*)—An other beautiful everlasting flower. The flowers are fadeless, purple, red, white, pink, yellow, etc.; grow from 2 to 3 feet high. Sow early in Spring.

No. 214.—BALLOON VINE (*Cardiospermum haliacabum.* —A curious climbing vine, native of the river banks west of the Mississippi. The seeds are grey in a large inflated capsule. Vine 4 to 6 feet long. Sow early, in the open ground; flowers in July and August.

No. 215.—ESCHSCHOLTZIA VINE (*E. Scaber*).—A rapid growing climber, with pretty, compact foliage, from which the numerous clusters of light orange colored flowers project. Sow in place of wheel; bears a profusion till quite late. Sow in pots or frames, so as to have it blown all summer, or in the open ground, cover slightly; transplant near old stumps or trellisses.

No. 216.—ACCROCLINIUM (*A. roseum.*)—An everlasting flower, similar to but more robust and hardy than No. 207. Grows from 1 to 2 feet high; flowers rose-color, very pretty. Sow middle of May, in sandy loam, or grow in pots and turn out into the open border first of June. In stiff soil, make drills, and cover lightly with sandy soil.

Exhibition Tables at the Office of the American Agriculturist.

In addition to the Corn Bread, noticed on page 25, the following articles have been exhibited since last report:

VEGETABLES, ETC.—*Potatoes.*—Worcester's Seedling and California Seedling, exhibited by Henry Edgar, Thompson, L. I.....Sweet potatoes, by Wm. M. Taylor, Bayport, L. I.....Two hills sweet potatoes, by J. C. Thompson, Staten Island.....Another freak of nature, a sweet potato, grown through a buckle-hole. In a leather strap, by Mrs. R. H. Tanery, Bridgeport, N. J.....Garnet Chili potato, reported yield 253 bushels to the acre, by Haskell Brothers, Seneca Falls, Seneca Co., N. Y.....By H. Foster, Babylon, L. I.....Collection of potatoes, very fine, by W. S. Carpenter, Rye, N. Y.....*Beans.*—Chili beans, very large superior flavor and extraordinary size, by W. F. Heins, Esq., Woodstock, N. Y.....A New Fever and ague bean, and yard beans, by John P. Simmons, N. J.....*Cauliflower.*—Very large, by W. F. Heins, Woodstock, N. Y.....*Squashes, etc.*—Boston marrow and true hubbard squash, S. S. Conover, Washington Market, N. Y.....Hubbard squash, by I. D. McCabe, Searsdale, N. Y.....Crooked neck squash, by R. M. Cary, Factoryville, L. I.....*Tomatoes.*—Very fine and large, by Edward Walter, Fort Lee, N. Y.....Five Tomatoes, by Caleb Lyon, Georgetown, L. I.....*Onions.*—Red and white by W. J. Spence, L. I.....*Pine Apple* in full perfection, nearly ripe, in pot, by C. H. Lilienthal, Yonkers, N. Y.....Fine Apple pumpkin, by S. B. Conover, Washington Market, N. Y.....Two seven year pumpkins, one of which is now 4 years old, and the other one year old, both in beautiful preservation, kept only in a dry cellar; by J. C. Thompson, Staten Island.....Still another freak of nature, a beet grown through a keel bone, by Cummings, editor of New-York Observer, Rye, N. Y.....A carrot, very fine, 3½ lbs., by P. S. Sheperd, Mamaroneck, N. Y.....A large Lima pumpkin, of fine shape, 7 feet 2 inches in circumference and weighing, when picked, 204 lbs. by Geo. Barclay, New Hamburg, Dutchess Co., N. Y.....Long Island Beet, 15 lbs., by Charles King, Port Richmond, S. I., N. Y.....Long white French turnip, 11¼ lbs. Long orange carrot, Long Red beet, King Philip corn, fine, and parsneps, by A. M. H., Rye, N. Y. (came by express, full name not given).....Mangel wurzel, by Mr. Jones, Lyons Farms, N. J.....Turnip Beet, 14¾ lbs., by J. E. Chapman, Perth Amboy, N. J.....California bottle Gourd, 3 feet 10 inches long, by Joseph Schare, Brooklyn, N. Y.....Strap leaf turnips, and fine green-top yellow carrots, by L. Jacobs, Westfield, S. I., N. Y.....Large Radish, 3 lbs., East 76th street, N. Y.....White Sugar Beet Mr. Plato, Harlem Depot, Conn.....Onions, grown by Joseph Storres, Madison, N. J.....One root of red clover 5 feet high, S. Barfoot, Kent Co., Md.—Solid white celery, very large and fine, grown by Wm. Hennessy, Yonkers, N. Y.....Zea maize, gardener to Wm. Shaw, Esq., Clifton, S. I., N. Y.....Crystal flint corn, and 8 rowed thin flint, by D. W. Brower, Bergen Co., N. J.....First importation of cotton from *Beaufort, S. C.*, by Henry J. Winser, Esq., (of N. Y. Times).....16 and 8 rowed corn, L. Cubington, Compass Douglass Co., Ill.....Jersey white and yellow corn, very fine, by J. Wood, Rockaway, N. J.....Java wheat, China Tea wheat, and mammoth timothy heads, by Mr. Hicksinson, St. Johnsville, Vt.....Cotton grown out of doors, and by Orange Judd, Flushing, L. I.....Full of the Orange, by Mr. Brick, Brooklyn, L. I.....Japanese Quince, by Mr. Wyatt, Manassas, Staten Island.....A variety of Apples, by Miss Knowles, Middletown, Conn.....Baker Apples, fine, by F. A. Rockwell, Ridgefield, Conn.....Sample of Apples, grown from Isabella, flowered in 2nd week of August, 16 bunches on vine 14 years old, remarkable, by Wm. Cone, South-8th Street, Brooklyn, E. D.....Joan Apples, by G. Welsher, Staten Island.....Grapes wanting a name, by P. W. Caesar, 20 Beaver-st., New-York.....Catawba Grapes, G. Pendell, Hempstead, N. Y.....Seedling Apples, wanting a name, from D. C. Beuton, Quincy, Ill.....Pecan Nuts, and bottom Hickory Nuts, by J. Wesley Woodruff, Quincy, Ill.

FLOWERS.—Apple blossom (several on the tree, Oct. 19th), by Mr. Hume, Manhattanville, N. Y.....Cut flowers in profusion of various kinds, also red and yellow Capsicums, by O. Judd, Flushing, N. Y.....Pompone Chrysanthemums, Dahlias, Cut flowers, (at various times) Carnations, etc., by C. S. Pell, N. Y. Orphan Asylum.....Dahlias and Monthly Belgian Honeysuckle, by John F. Simmons, N. J.....Abutilons, Cobaea, Zinnias, roses, etc., by C. S. Pell, Orphan Asylum.....Pompone Chrysanthemums, very fine, from Peter Henderson, Jersey-City, N. J. and John Mc. N. Y.....Chrysanthemums, most tastefully arranged on card board upon white paper, 64 varieties, some the newest, by W. F. Heins, Esq., Woodstock, N. Y.....Dahlias, very fine blooms, by C. Lilienthal, Yonkers, N. Y.....Splendid Bouquet, of many hundreds of bloom, gathered Nov. 19th, and made up of dwarf and pompone Chrysanthemums, Agrostemma Principalis, Stocks, evergreens, etc., etc., by W. F. Heins, Woodstock, N. Y.....Winter Cherry, Physalis Francheti, fine, by Jacob Youngs, Greenport, L. I.....Two Yuccas, Seedling, by A. S. Fuller, Brooklyn.

MISCELLANEOUS.—Horned Toad, from A. S. Siler, Santa Fe Co., Utah Territory.....Hive Bee, by C. E. Miller, N. Y.....Tomato Wine, made in 1859, by W. F. Heins, Woodstock, N. Y.....Sewing cotton, by Wm. Thompson, Staten Island.....New Fruit Picker, by A. M. Halsted, Rye, N. Y., and another by N. G. Carnes, Riverdale, L. I.....A piece of flag worn from the Weehawken Frigate during the bombardment of Port Royal, by J. McCarthy. Honey, fine specimen of clover make, in glass case, by M. Quinby, Coeymansville, N. Y.

☞ Our tables are always free for the exhibition of useful articles, or those interesting to the public. Those pertaining to the Farm, Garden, or Household, are most appropriate.

Cotton in the Central States.

Not the perennial cotton which has made some talk of late, and which has been selling at 20 cents per seed, but the common cotton of the Southern States. We have now, well ripened samples of cotton bolls, fibres, grown in open ground, in Westchester County, N. Y., and others have been shown from Long Island and New-Jersey, raised last year. This establishes the fact that, in favorable seasons, good cotton can be raised so far north as 41°, and that it will ripen in any ordinary season in Delaware, Maryland, Southern Ohio, Indiana, Illinois, Missouri, Kansas, and California. It will doubtless be planted more or less in all of these States, and further north by starting seeds in hot-beds, and afterward planting out in the open ground. There is no difficulty in the treatment. The seed vegetates readily, and if sown where it is to grow, may be 3 or 4 feet apart, drilled in thickly, and afterwards thinned to 15 or 18 inches distant. A seed drill will greatly facilitate the planting. If started by artificial heat, prepare the hot-bed and sow about the middle of April, transplanting after all danger of frost is over, during the latter part of May.—Of course we do not expect to go into extensive cotton growing at the North, but every one may raise a little as an ornament and thus perhaps do something toward acclimating the plant

Cotton at the North.—Theo. Tilton, of New-York Independent, has raised sufficient cotton in his yard at Brooklyn, to make a shirt for himself. The seeds were started in a hot-bed, and afterward planted in the open garden, where the bolls ripened their seed. We have some of the cotton on our exhibition table.

Containing a great variety of items, including many good hints and suggestions which we give in small type and condensed form for want of space elsewhere.

To Correspondents.—Our Basket Columns are rather crowded by the necessary Seed Notes, and several items are left over. Indeed, we are now receiving a great number of hints, queries, etc., in renewal letters, which will furnish interesting topics to be discussed as we have room hereafter. We solicit such items without limit.

The Prize Essays.—In response to our offers, some sixty essays were sent in. They have been handed over to competent committees, who are at work upon them as they have time; but as there are more than **1500** pages of manuscript to be read over, it will require considerable time to go through with the whole, and decide upon their relative merits. As fast as we receive the decisions in the several classes, the successful competitors will be notified and the money be subject to their order. We shall publish the best essays in the order most appropriate to the successive seasons.

A Young Man who knows nothing of Farming.—J. V. will do well to put his $300 at interest, and to hire himself to a good farmer, till his $300 becomes $400, and he becomes pretty well initiated into the business. We would about as soon undertake to live by our pen without knowing our letters, as to live by farming without some previous experience,—such as he could get with a first-rate farmer.

A Great Pumpkin.—We have had "some pumpkins" on exhibition since the harvest season, the largest of which is a Lima variety which was raised by Mr. Geo. Barclay of Dutchess Co., N. Y., and weighed 304 pounds, when taken from the field. It is of an orange color, splashed with cream, oblately flattened, and ribbed. It measures 7 feet 2 inches in circumference.

A Chestnut Orchard.—The Chardon Democrat says that E. J. Ferriss, of Lake Co., O., has an orchard of 100 chestnut trees, just coming into bearing. He has an accidental variety, very large and early, which he is multiplying by engrafting, and is sanguine that chestnut culture will prove remunerative, as late frosts in the Spring never injure the flowers, as they do not appear until about the 10th of July.

Iowa Apples.—Mr. A. S. Fuller placed on our Exhibition tables, Dec. 16, samples of Fall Pippins, Northern Spy, Mountain Pippin, White Winter Pearmain, Peck's Pleasant, Swaar, Melon, McClellan, Winter Sweet, Belmont, Raules Jannet, Ladies Sweeting, Pryors Red, Rambo, Newtown Spitzenberg, Black Gilliflower, and Hays Winter Wine. They were fine specimens raised by Mr. Henry Avery of Burlington, Iowa, and compare very favorably with the same varieties grown at the East.

Buried Apples.—"Experimentor," writing from Wyoming Co., Pa., says: I have tried several plans for preserving apples but have never found any thing that pleases me better than the old fashioned Dutchess County way. Take perfectly sound apples, and bury them in a dry place in the garden and keep them dry. Put 5 to 10 bushels in a heap; cover with about 3 or 4 inches of straw, and then with about the same depth of earth, leaving a small hole at the top, and then cover the whole with a straw cap. Or better with a roof of boards or slabs. Apples treated in this manner retain their flavor, which is of the greatest importance. I have often, for sale fall and early winter use, packed them in sawdust, wheat and oats chaff or wheat bran, dry sand, and in wooden buckets, etc., but none of these experiments have pleased me. They will not rot, but loose their fruity flavor.

White Doyenne Pear.—(E. Blosser, Middlesex Co., Conn.) This is the old Virgalieu, which, though generally discarded in New-England, is still a fine pear at the West. As a dwarf, it succeeds pretty well hereabouts.

Mixing Grapes.—Enquirer may plant as many kinds as he pleases on the same trellis. The intermixture of the pollen will not affect perceptibly the perfection, or flavor of the fruit. A very strong growing variety and gross feeder will so take the nourishment out of the soil, that thus its delicate neighbor will be nearly starved. The Concord will rob a Delaware if planted too close, and care is not taken to prevent the robbery.

Old Huckleberry Pastures as Vineyard Sites.—(J. C., Jr.)—The subject is too extensive for a Basket article. If the exposure is southeast or south, and the ground dry and not too leachy, and if you have plenty of manure and can apply 100 or 150 dollars' worth per acre, composted with twice its bulk of muck, and expend an equal sum in labor, your 2 or 3 acres of huckleberry pasture will make a good vineyard. Your selection of grapes is probably good; the Delaware should have a prominent place.

Aromatic Plants.—Trees of the Myrtle and Laurel families abound in China, Japan and Australia. These families of plants produce cloves, cajeput oil, gum kino, etc. (from myrtaceous plants), camphor, cinnamon, cassia, benzoin, sassafras, etc., (from the Laurineous plants). The Revue Horticole states that the atmosphere of Australia is so filled with the odors from these trees that fevers never exist, even in apparently the most malarious of swamps.

How Large a Garden.—"Ex City Subscriber" inquires "How much land will be needed for a kitchen garden for a family of five persons, with a liberal shiftwance for City cousins. For raising Garden Sauce vegetables and small fruits a quarter of an acre would be ample. Half an acre could be profitably used in providing a supply of extra vegetables, with potatoes, etc., for Winter use.

Second Crop of Radishes.—The first week in Dec., George Haywood, of Brooklyn, placed upon our table crisp and tender radishes, from seed grown the same season. The first crop was sown early in May, and a few left to ripen seed, and this in turn was sown the last of September. They have been in eating condition for some weeks, and were of the scarlet turnip-shaped variety.

Old Asparagus Beds.—("Old Will.") Use plenty of manure in the Fall either as a top dressing or forked in, and salt well in the Spring.

Rhododendron—Correction.—In the article page 368, Dec. No., on transplanting the Rhododendron, by Mr. L. H. Johns, the color should have been printed *blush* white, instead of blueish white.

Raspberry Jam and Wine.—The Western Railroad Gazette states, that 12 to 15 tuns of raspberry jam, and from 300 to 400 gallons raspberry wine are annually made on Sugar Island, in the Sault St. Marie River, Mich. The berries are gathered by the Indians and sold to parties who manufacture the jam and wine, and send it to Chicago and other cities for a market.

Red Clover.—Branch 5 feet long received from S. Barfoot, Kent Co., C. W., a large growth but not equal to that referred to on page 329, last volume.

Rhyme—Poetry.—We are often favored with contributions of rhyme, and occasional bits of real poetry; but we can publish very little, if any, of such material. If there were no other objection, this one is fatal, viz.: the difficulty of properly translating English poetry into German, and *vice versa*—and since all articles go into each edition, we are obliged to omit poetry, as a general rule.

Snow Cream.—Mrs. M. A. H. Rowe, Columbia Co., N. Y., says the following is quite equal to ice cream. Beat thoroughly 1 egg with 1 cup white sugar, add 1 cup sweet cream, flavor to the taste, and stir in snow until it is quite stiff.

Beef and Pork Pickle—Correction.—The recipe at the foot of page 357 of our last issue was singularly misprinted. Mr. Aten who sent us the recipe pointed out the mistake. It should read—4 gallons water, 3 quarts salt, 1 pint molasses, 2 oz. saltpetre.

Recipe Wanted.—J. Henderson, Mifflin Co., Pa., inquires for directions for making the French national dish called "Pot-a-feu."

The Last First.—On the *last* page of the November number of one of our competitors for public favor and patronage we read: "The rapidly increasing circulation of this journal . . and its daily increasing popularity proves it to have become an established fact."—— On the *first* page we read: "The publication of this paper will necessarily be discontinued with the next number. . . ." Evidently the last written item is placed first.

A Valuable Opinion.—A recent *Maine Farmer*, (a journal devoted to news and agriculture,) says: "Those of our readers who want a *practical* and *reliable* monthly Agricultural Journal, issued in good form for binding, and containing numerous illustrations, we would advise to subscribe for the *American Agriculturist*. . . ." This, coming as it does from one engaged in the same line of business, we consider as the highest praise. It also exhibits just the feeling we like to see and strive to cherish, which is above petty jealousy. The Maine Farmer, edited by Dr. Holmes, and published by Messrs. Homan & Badger, at Augusta, Me., ($2 on a year,) is always one of our welcome exchanges.

"Manual of Agriculture, for the School, the Farm, and the Fireside." This book of 306 pages, prepared by Messrs. Geo. B. Emerson and Chas. L. Flint, and published by Messrs. Swan, Brewer & Tileston, (75c.) we have had on our table for several weeks, dipping into it now and then, and uncertain whether to give it a strong endorsement or not. It is one of the most thoroughly edited agricultural works published, and this will be the main obstacle to its general introduction. It is close reading—many thoughts packed in few words—and, while well adapted to older minds, will be rather strong mental food for children. A good teacher, experienced in agriculture, using this as a book of topics, would make it interesting. The fact is that which may be useful in stating unquestioned truths; we should have preferred more of illustrative argument. While approving of the doctrines of the book as a whole, there are some statements which we should call in question, had we time and room for an extended review.

Book on Breeding of Domestic Animals.—A valuable little work of 164 pages, by S. L. Goodale, Secretary of Maine Agricultural Society, in which is discussed the principles of breeding, or the physical laws involved in the reproduction and improvement of domestic animals. Correct knowledge on this subject is important as well as interesting to every one, and Mr. Goodale has furnished much valuable information, and many useful facts and hints, condensed and systematically arranged. (Price, 50 cents, postpaid.)

Two Rules for the Barn.—1. Feed regularly. All animals desire their food at stated intervals, and digest it better when fed at about the same hour daily. 2. Feed uniformly and moderately. Do not give an excess one day, and too little another day. Let the fodder be proportioned in kind and amount to the animal; then let it be given systematically.—*Old Reader.*

Transferring Wild Bees.—"Bee Hunter," Providence, R. I., and others can either cut down the "bee-tree" and saw off the section containing the honey and set it near the stand; or they can place a common hive or box over an orifice made in one end of the section, and hive smoke into the other end to drive the bees from the combs. Then cut into the log and carefully remove the comb in as large pieces as possible, and fit them into the movable frames, or box of another hive, securing them with the help of cross sticks. Put in about 25 lbs. honey and brood comb for Winter use, and drive the bees into the hive, where they will make a contented home.

Destroying Moles.—Mr. Geo. Barclay of Dutchess Co., N. Y., puts sheets of tin across the new made mole tracks running them in so slanting as to throw the moles upon the surface in their attempt to work past them. Once on the surface they are easily killed by cats, terriers or boys. Two pieces of tin should be placed in each run, the upper edges approximating, as it is not known from which direction the animal will come.

James Warden, Baltimore Co., Md., kills moles by sinking glazed earthen pots beneath their runs. They cannot get out when once in. Post holes dug with a spade or bored with a post-hole auger is said to answer the same end.

Rusty Straw Unfit for Feeding.—R. McClure, in the Farmer and Gardener, gives an account of the injurious effects of rusty straw fed to horses, causing almost immediate sickness and death to a large number of animals belonging to a cavalry regiment. A decoction made from rusty straw given as an experiment caused loss of appetite, and sickness.

How to keep a Cow on Cape Cod.—(R. C., Jr.)—Pressed or "bundle" hay will probably cost you 1 cent per pound. A ton of hay ($30,) a ton of straw ($8,) and a ton of cornstalks ($5;) with what meal and roots she ought to eat, will keep your cow a year. In the Winter, give her cut feed,—half hay, with straw and stalks, wet up with 3 quarts corn meal (or 4 quarts **ship-**

stuff, or 2 quarts oil meal); of this about 1 bushel morning and evening, and ½ bushel of sugar beets or mangel-wurzels cut fine. This feed will cost 23 to 30 cents a day. In the Summer, give her pasturage, if you can, and feed her nice "slops" or swill, with dry hay, every night. Her manure will enable you to raise green feed (corn, etc.) for her the second year, and thus, each year she will cost you less. She should give you, on an average, 8 to 10 quarts of milk a day, the year round, worth 32 to 50 cents a day.—This is *one* way to do it. If this does not suit your circumstances, we may try again.

The effect of Cold on fattening Animals.—Dr. Playfair, in the Journal of the Royal Agricultural Society, in speaking of the necessity of warmth to fatten an animal readily, says that to keep up the animal heat, the oxygen of the air unites with that portion of the blood which goes to form fat and tissues, and converts it into carbonic acid, water, and animals. Where all the vitality of the animal is used to manufacture heat, there is no power left to increase the fat. If we would fatten animals in winter we must give them a summer temperature, by warming the shed and stables they occupy. The air that they breathe should be as pure as possible.

Another Prolific Sow.—Wm. P. Hood, Bristol Co., Mass., claims to have the most prolific sow yet noticed in the *Agriculturist*—a Berkshire sow, 2 years and 7 months old, that has given birth to 87 pigs in five litters. The largest litter contained 19, the smallest, 16 pigs. He says she transmits her prolificness to her offspring.

Kidney Worms in Hogs.—H. J. Hulling, La Salle Co., Ill. In addition to the remedies given on page 220, (August No.) of last volume, administer spirits of turpentine in moderate doses, which, though harmless to the animal, is very destructive to worms. The disease often proves fatal, and prevention is much better than attempted cure.

The Army Worm.—Henry Griffing, Jasper Co., Ill., writes to the *American Agriculturist* that he doubts the correctness of Dr. Fitch's theory that the army worm originates in swamps, as published on page 331, Vol. XIX. He says it was very destructive in his neighborhood, and there are no swamps for several counties around. In that section the worms originated wholly in Timothy grass meadows.

Ventilation of Barns.—Unfortunately there are yet in our country few barns that need airing. Most are aired altogether too much for the comfort and thrift of the animals. But some barns are tightly built, the foundation of mason work, or thoroughly banked, the floors mostly air tight, and the sides closely boarded, or battened. In these provision for ventilation should be made. A ventilator, in the central part of the ridge, in the form of a small tower, is both ornamental and useful. Especially give horses pure air. They should never pass the night in an atmosphere polluted with exhalations arising from other animals. It is not only unpleasant to them, but detracts from their power to labor.

Ventilation of Stables.—"Iowa subscriber." Run a trunk of matched boards 3½ or 4 feet square up from somewhere near the middle over the cattle floor, passing one side of the threshing floor to the roof. It need not pass out, but must come close to a self-ventilator like the one figured on page 12. It is of course flush with the ceiling of the cattle floor. Swinging doors at one or two places in it are exceedingly convenient for throwing down hay, cut-feed, or straw, from the floor or loft above. These doors should swing from the tops so as always to remain shut when not in use. You will find such a ventilator sufficient, convenient, and cheap.

Condition Powders.—(J. D. Belcher.)—There are many kinds, good enough, perhaps; but the following we *know* to be good: Mix one part of salt with five parts of wood ashes, and stir it into the mess fed to your stock. We can not specify just how often, but give it whenever an animal seems to need it. This will sharpen the appetite, and keep stock in good, healthy condition. It will generally obviate the necessity of using any other medicine. The condition powders of the "horse-doctors" have usually antimony for their basis—often also contain *arsenic*, and other drugs, which it is never best to give, except for some real cause. Ginger, aniseseed, and other spicy or aromatic articles, are common ingredients to disguise the taste, and may be used for their tonic effect, often with profit, and without danger. *

"Dead Ground."—Henry C. McCoy, of Somerset Co., Md., writes: "I live in a sweet potato country, and our land often becomes "*dead*" in places of 20 feet square, but only when sweet potatoes are grown. The same spot will bring corn or almost any other kind of produce". . The remedy is, of course, a removal of the cause, which, as we do not comprehend, we can only say in general, secure a free circulation of air and freedom from water in the soil by draining thoroughly; see if you can find any external or other difference in the character of the soil. Try an application of freshly-slacked lime at the rate of half a bushel to such a spot as you mention. "

How Much Manure for Wheat?—The impression prevails in many quarters at the east, that the reason why we do not raise our own wheat is because it requires so much manure. "Triticum" inquires, Is it true that two-horse cart-loads of stall manure are required to raise 25 bushels of wheat per acre? Wheat does not require more manure than Indian corn, but it does require a superior mechanical preparation of the soil. Those of our readers who systematically manure for wheat in whatever way will favor "Triticum," and doubtless many others by communicating their modes of culture for our columns. Of course, no rule can be given applicable to all soils. The idea is, we suppose, to ascertain how much of a given kind of manure will *pay* on a particular kind of soil.

Keeping Potatoes.—John C. Bishop, of Fond du Lac County, Wis., for some years has followed with great success the plan which he describes as follows: "They are dug about the middle of October, when the ground is dry. All the fine dirt falling into the bottom of the wagon is put in with the potatoes; as they sweat, the dry dirt absorbs the moisture. The bins are about two feet wide, raised from the cellar bottom six or eight inches. Their sides are set out from the wall by a 2x4 inch stick, and so between the bins. This prevents any external dampness from coming in contact with the potatoes; the air circulates around them, and I am convinced that potatoes so kept will be sounder and freer from disease than in any other way. A bin 14 feet long by 2 feet wide and 6 feet high, will hold over a hundred bushels. Such a bin will contain 220 feet of lumber."

How to Keep Winter Squashes.—

"Agin the chimbly crooknecks hung,
And in the corner 'ou roasted
The old queen's-arm, that grandsir Young
Fetched hum from Concord, busted."

So runs the Yankee ballad of Zekel's courtship. Our frugal ancestry understood better than we, perhaps, how necessary a warm, dry place was to keep winter squashes. We may pattern from them and keep our Hubbards, crooknecks, and marrows out of damp cellars or freezing lofts.

Varnishing Cheeses.—A writer in the Dairy Farmer states that it is the practice of some dairymen to coat each cheese thinly with a varnish made from gum shellac dissolved in alcohol, when about to be shipped for market. It is said to improve the appearance of the cheese and to keep it from losing weight and gathering mold. We can not say as to the value of this recommendation.

To Keep Cranberries Fresh.—J. R. First see that *all* are sound and plump, then put them in tubs or large jars, fill the same with water, and keep in a cold cellar, without freezing.

Use of the Plow in Draining.—A writer in the N. H. Journal of Agriculture does most of the labor of ditching with a plow. He plows two furrows and throws out the earth. This is sufficiently wide for the drain. Two more furrows are in like manner plowed, and the earth thrown out by hand, when the plow is chained to the centre of a long, strong pole, laid across the drain, and two pair of oxen hitched on—one yoke on each side of the ditch. As the ditch grows deeper, the chain is lengthened, until 4 to 6 feet in depth is reached. This is very similar to the method described and illustrated in the *Agriculturist* for last October, page 297.

Board Drains.—D. M. Allen, of Cuyahoga Co., O., uses inch boards nailed together "like an eaves-trough," and laid open side down, for under-drains, and wishes to know if any of our readers have had experience with such drains, and can inform him in regard to their effectiveness, durability, etc.

Gas Lime.—We must refer inquirers to the number of the *Agriculturist* for March, 1861, (page 75, last volume,) for full information on this subject. It will generally pay to cart it several miles, but before it is used it must be thoroughly spread out to air, be broken up fine, and composted with muck or earth. Such a compost ought to lie six months before it is used; and after it is incorporated with the soil, two or three weeks should elapse before sowing grain or grass seed. We would not advise R. W. to apply it to his pear trees without trying an experiment or two, and watching the result.

Musical Instruction.—L. Winfield, Orange Co., N. Y., suggests that an elementary course of musical instruction be given in the Boys' and Girls' Department of the *Agriculturist*. It would not do to encroach upon the crowded space given to the children, with matter which can be as easily obtained in books; besides, we have little faith in musical instruction unaccompanied by the living teacher.

Ladies' Feet.—"Died of thin shoes"; so runs the epitaph. Thank Providence it is the fashion both for ladies and gentlemen now, to wear thick and sensible ones. So arguments against thin shoes are waste breath—and we can only say, follow the fashion.

Ventilation of Sleeping Rooms.—A correspondent of the *Agriculturist* writes: Sleeping rooms, in which there has been a fire during the day, should be aired before retiring. The importance of sleeping in a fine, bracing atmosphere can hardly be overstated. Even if there has been no fire during the day, it is well to open a door and a window or two, and to fill the room with entirely fresh atmosphere. Persons who will try this, need not take our word for the benefit. They will realize it in the greater elasticity and freshness with which they will arise in the morning.

Transferring Prints upon Wood, etc.—(C. C. R.)—This is done, we believe, by coating the surface with copal varnish, and before it is dry laying on the picture (wood-cuts transfer best) and smoothing it down upon the varnish with a paper folder. When the varnish is dry, moisten the paper and rub it off with the finger, and after carefully removing the paper, the print will be left; then give it another coat or two of varnish.

Lightning Rods.—(I. S.) Put up a ¾-inch iron rod, screw-jointed, running up one end of the barn, along the ridge-pole, having a single-pointed silver-tipped rod two or three feet high, at each end of the ridge-pole, and one extending equally high above the ventilator in the middle of the roof; have the end carried well down into earth which remains moist the year round.

Effect of Electrical Light on Vegetation.—Plants bleached by the exclusion of light, will grow green if exposed to the action of *electrical light* for a few days, in the same way as if acted upon by the solar rays. This is learned by recent experiments made in France, and noticed in the *Comptus Rendus*. It shows that even in these most delicate chemical effects, the light from the two sources is identical.

Do Rats Eat Grapes?—This inquiry recently mooted in the Gardener's Chronicle, (Eng.,) elicited many facts showing that these vermin do climb walls, trellises, and vines in houses to devour the fruit, in some cases taking it to their holes, where it was found.

A Hint to Stove Makers.—A writer in the Rural New-Yorker asks that stove manufacturers would leave off all the beading and figures and flowers and "ifficks" from their patterns. It would save much expense, and make it much less troublesome for housekeepers to black and polish the stoves. Some ornament may be allowed on parlor stoves, but nothing more than a simple plating to increase the heating surface should be used on a cooking stove.

Well Apparatus.—"Ex City Subscriber." The self dipping and dumping apparatus for raising water from wells, if rightly made, is superior to the old fashioned drum, or the wheel and two buckets.

Coal Oil for Moles.—"J. M. K." writes to the *American Agriculturist*, that he banished the moles which were very destructive in his grounds, by the use of coal oil. A small opening was made with the finger, at intervals along their track, from a tablespoonful to a gill of the liquid was poured in, and then covered to keep in the scent. This was repeated as often as a fresh track was made, and they soon left in disgust. He recommends the crude, unrefined oil, which can be had cheaply.

Coal Oil in War.—A correspondent of the Scientific American proposes that small steamers be fitted up with tanks of coal oil so arranged as to be thrown upon vessels with a steam pump. Then by setting fire to the stream the attacked vessel could be deluged with flame. This is a bright idea *if* it can be carried into practice. Camphene or spirits of turpentine would be preferable. fire will not readily follow a stream of common coal oil.

The War Rumors.

We are happy to assure our readers that, at this date (Oct. 20), there does not appear to be any serious ground for fearing a war with England. Most of the excitement thus far has been mainly due to those unscrupulous newspapers, here and abroad, which feed and fatten upon popular commotions. To these a battle, a catastrophe, a disaster, is food and sustenance. If any wrong has been done, it will doubtless be settled by diplomatic correspondence, and not by a resort to arms. There are too many ties of interest binding this country and England together, to permit their being easily sundered. The foreign need of our surplus breadstuffs would alone be a strong incentive to the maintenance of peaceful relations, and in this respect our farmers stand as arbitrators. We firmly believe that the good prospects, which we have for months past placed before our readers, are yet to continue, and that by another month we shall be able to report the entire subsidence of the recent commotions, which have been mainly produced by the sensation Press.

Years of Scarcity and Abundance.

The uncertainty of the weather and of the crops is an old subject, but it is one about which no agriculturist can feel indifferent. Changeable as the seasons are, there is yet reason to believe that, amid much apparent uncertainty, law and order do still prevail. At least, this much may be held, that in the long run, sunshine will succeed storm, and abundance follow scarcity. There may be a year or two of poor crops, but these will soon be balanced by as many of good crops. We cannot tell how large a period the cycle may embrace, but we may be confident that a cycle there will be.

The French are more given to observing and theorizing on these subjects, than we busy Yankees are. Some time ago, M. Becquerel read a paper before the Academy of Sciences, in Paris, on the culture of wheat in France, in which he presented some statistics worth looking at. His facts show that "there is a periodicity in the recurrence of good and bad harvests; that five and six years of abundance and five or six years of scarcity follow each other pretty regularly." He quotes from Count Hugo the following table, extending 33 years:

From the year 1816 to 1821 was a period of scarcity.
From the year 1822 to 1837 was a period of abundance.
From the year 1838 to 1842 was a period of scarcity.
From the year 1833 to 1837 was a period of abundance.
From the year 1838 to 1842 was a mixed period.
From the year 1843 to 1847 was a period of scarcity.
From the year 1848 to 1852 was a period of abundance.

Now, let these facts be taken for what they are worth. They do seem to indicate a certain order and regularity amid apparent disorder. Perhaps, if we should make careful observations, we should find a similar law prevailing here. The cycle may extend three years, or five, or some other period, but undoubtedly there is some regular balancing of the seasons.

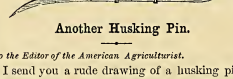
An ingenious Scotch writer thinks he has found a natural cause to explain this law. He refers to Schwabe, a German astronomer, who proves that the spots on the sun maintain a certain periodicity of about five and six years; then to Gautier, a Swiss savan, who affirms that this periodicity tallies with that of the grain crops. And he reasons that, as the light and heat of the sun are essential to the successful growth of vegetation, it is not unscientific to suppose that the diminution of them should diminish the crops, and their increase augment them.

We are not prepared as yet, to give much weight to this theory; but it will do no harm if farmers remember it as a matter for observation.

The Millers Not Always at Fault.

A correspondent, who is a miller by trade, sends to the *American Agriculturist* a somewhat lengthy communication, from which we condense the following suggestions: The mechanical skill of the miller is often called in question by housewives, when the bread does not look inviting, and his honesty in the matter of taking toll is also sometimes doubted by the farmer, when he is not at fault. Frequently, wheat which has been poorly screened from the chess, "cockle," and other foul stuff, is taken to be ground; then, if the miller grinds it just as received, without re-screening, a poor article of flour is turned out. If, however, from a desire to maintain his reputation for making good flour, he takes pains to remove the foul stuff, then the flour from the grist falls short in weight, and he is suspected of cheating in the toll. Much grain is injured by being sprouted, and in some sections it is threshed on the ground, and thus mixed with gravel or dirt, which must injure the quality of the flour. If good grain, properly screened, be taken to mill, our correspondent thinks less fault will be found with the miller, and this is undoubtedly true.

Another difficulty stated to be in the way of the miller, is the practice of having corn ground together with the cob, particularly where all the runs of stones are driven by a single water wheel. The corn, being heavier, will nearly all pass between the stones first, and when the cobs, which are more easily ground, begin to run, the mill starts off in double quick time. To remedy this, the miller gives a little more feed to the stone, and unless constantly watched, which is often impracticable, the stone is crowded, and the mill runs slowly again: thus an unsteady motion is given, and good flour can not be made on the other stones which are affected by this continued change. One remedy for this latter difficulty would be, to grind such feed only on certain days, and then have no other grain passing through the stones at the same time.



Another Husking Pin.

To the Editor of the American Agriculturist.

I send you a rude drawing of a husking pin which I have used these twelve years, and think it superior to the wooden ones of which you made a notice. It is of ¾-inch iron, made to fit the hand, the ring going round the little finger, and the point bearing against the thumb. A strap of leather, an inch wide, through the ends of which the pin passes, goes over the two middle fingers. Any common blacksmith can make the implement. ELI C. JONES.

Blair Co., Pa.

Agricultural Dentistry.

A subscriber writes to the *Agriculturist:* I like the ideas of a correspondent of the Dairy Farmer, who suggests that one operation be made of taking out the tree, body, roots, and all. For this purpose he recommends to use a stout rope eighty or more feet long, with a pully; the rope to be fastened near the top of the tree, the pulley anchored to an adjoining stump, or to a loaded stone boat, and horse or ox power applied. Small trees could thus be *extracted* at once; for large ones it would be necessary to cut some of the main roots near the surface. The tree itself would act as a lever to raise its own roots from the ground. In localities where wood is valuable, the saving of fuel in the stumps and roots brought up, would form quite an item, besides the additional land cleared at once. ROOT.

[The above we find in type, but do not attach great importance to the suggestion, from the fact that it would be found difficult to fasten the rope far enough up the trunk to obtain a sufficient leverage to pull over a tree with its green roots firmly imbedded in a strong soil. The use of a long light ladder might be found practicable. Indeed, we have seen a few trees thus removed, but they were those which had been girdled for two or three years, and most of the roots were partially decayed. In clearing oak land at the West, a somewhat common practice has been to clear out the under-brush and small trees, then girdle the larger ones, and sow a crop of wheat, following with corn. After two or three years a heavy Autumn wind blows over most of the trees, and they are cut or burned into short pieces, and logged up and burned. If any one has been successful in pulling over *green* trees with ropes, we shall be glad to hear from him in the *Agriculturist*.—O. J.]

For the American Agriculturist.

Work Bulls in the Yoke.

Idlers are dangerous members of society, and bulls are no exception. Their vicious propensities when left unemployed, make them the most dreaded animals on the farm. But however gentle they may remain, it is no small tax to support these gentlemen of leisure among farm stock. Why should they not be taught to bear the yoke and divide the labor with their less favored brethren? They have probably been left generally unused for such purposes, because of the supposed difficulty of managing them; but a well-broken, well-worked bull is a different character from the pampered sultan left to his own way. If taken young, and properly treated, they need be little more difficult to manage than oxen. The writer knew a whimsical Doctor in this State, who trained a two-year old bull to draw his sulky, and he attracted great attention, galloping about the country with this singular "turn-out." The Boston Cultivator gives the case of an imported Ayrshire bull, owned by Mr. E. R. Andrews, of West Roxbury, Mass., which is broken to single harness, and worked daily before a cart. He can pull more than any horse upon the farm. He is very tractable, easily managed, and quick in his action, walking faster than the common gait of a horse. He is guided with reins attached to a ring in his nose. If judiciously kept, and not over-worked at the time of special service, such treatment will be rather a benefit than an injury, giving greater vigor and hardiness of constitution. Let these sinecurists pay their way.

REMARKS.—The above is perhaps partly true, but we can hardly endorse the advice to put valuable breeding animals to hard work in the yoke—certainly not to work them sufficiently to make them entirely docile. Doubtless, bulls can be kept somewhat gentle by constant handling from "infancy," but to work them enough to prevent the necessity of using a ring or headrope would lessen their breeding qualities.—ED.]

"The Straw-yard."

A fine frosty morning in Merry England at Christmas time. The first considerable fall of snow lies lightly on the thatch, the wind has not drifted it, the sun has not softened it, and even in the straw-yard it is as yet unsoiled and beautiful. The haze, which gave such a depth and softness to the atmosphere before the storm has gone, and the sharp, clear outlines of distant objects tell us, even if we look out from the window, turning our backs upon the blazing and crackling hearth, of the exhilarating tonic of the purified air. The horses fill their capacious lungs with joy, and are as ready for a ten-mile drive as for a caper on the meadow, or even a pull at the hay-rack. Let us enjoy the scene with Mr. Herring, one of the most famous of the animal painters of England, whose horses on canvass bring prices which many a farmer would rejoice to get for his four-year-olds. Every animated thing is out and enjoying it too. Black Prince, a fine noble fellow, looks monarch of all he surveys; the dapple pony rejoices in the realization that on Christmas-day morning he is not, as usual, bounding away over the moor to the market. So we may give them each a character, and cogitations appropriate to their looks and circumstances. The experience of the feathery snow is evidently a new sensation to the saucy little Berkshires under Sir Roger's heels. Bold Chanticleer, ready to dispute with any claimant the right to rule the yard as well as the roost, struts and cackles with an offended dignity, as if it had all been done without his counsel or consent. Well, Mr. Herring, we are much obliged for the picture, and hope the readers of the *Agriculturist* will enjoy it as much as we.

THE STRAW-YARD AT CHRISTMAS—From a Sketch by Herring.
(Engraved for the American Agriculturist.)

Fowl Management.

At this season, poultry need looking after, if we would keep them healthy, and in good laying condition. If they are confined, the hen-house should be light, warm, airy and dry. Any thing but wet quarters for hens; and the more sunshine the better. Keep their apartments clean. Be regular in the times of feeding. Variety in diet should also be sought after. Corn is always acceptable, and so are barley, refuse wheat, oats, boiled potatoes, and the like. An occasional picking of *fresh* meat is needed for laying hens; it is a partial substitute for the worms and insects which they get in the Summer. Keep clear of salt meat, however; this is often hurtful, and sometimes fatal. Give them plenty of gravel, old plaster, or broken oyster shells, or pounded bones, and supply fresh water to them regularly.

Whoever has an eye to the improvement of his flock by breeding, should now take the matter in hand; a single year will accomplish a great deal. Examine the fowls from day to day, while they are feeding, and having fixed upon the best roosters and the best hens, put the others in the pot, as fast as wanted. Select the hens for their healthy, vigorous constitutions, large, well-formed bodies, bright eyes, and good combs. "Early maturity," says a savan in hendom, "and good laying qualities must not be forgotten. The form is a good indication of the former, and also, to a certain extent, of the latter. If early maturity, beauty of form and refinement are carried too far, the tendency to lay eggs is supposed to be diminished." Decapitate restless, quarrelsome hens. Roosters should be chosen for their vigor, upright and valiant bearing, plump and strong bodies and legs. The relative importance of the color of the legs, is in dispute. Some stand up for white or bluish legs, averring that they indicate delicacy of flesh; while others battle for yellow legs, claiming that they bear up the richest and most highly flavored meat. As for ourselves, we refuse to be a party in this strife, but if our table is supplied with a plenty of either color, we shall ever be profoundly thankful!

A Protest against Cramming Poultry.

A correspondent of the *Agriculturist* writes thus: The other day I read an article in a city paper, describing the method by which French fowl raisers *are said* to make an ordinary chicken weigh seven or *eight* pounds. It seemed so absurd I thought nothing of it, until visiting an old farmer in my vicinity, I found him forcing flesh upon turkeys for the holidays, in nearly a similar manner, viz.: by stuffing dough down their unwilling throats until their crops would hold no more, the birds being in close quarters, without possibility of exercise. The French go a little further, excluding light as well as liberty, visiting the captives three times a day, cramming them with pellets of dough and a little lard—in quantities which nothing could have induced them to eat voluntarily. The treatment is continued a month or more, and they occasionally die under it. The description naively adds, 'we should think so'! It is not pleasant to think the unctuous plumptitude of these fabulously fat chickens is blont and disease—there is no other right name for it. There is only one right way to rear animals we design for food, and that the great majority pursue. They eat and drink, and come and go in the pure light and air at will. Every other course is *against nature*, and we are sure no sensible farmer will try the so-called "French" method of adding flesh to his poultry at the expense of the laws which alone can make them really fit for food. Common Sense.

The Family of the Grasses.

GEOGRAPHICAL DISTRIBUTION OF GRAINS.

If any thing on earth exhibits the ineffable wisdom and beneficence of the Creator, it certainly is this family of plants. No other family comprises so many genera, species, and individuals, and no others are so extensively distributed over the habitable globe. We see that the most useful plants are by far the most numerous; and the most widely diffused of these are embraced in the Grass Family, (*Gramineæ.*) The most useful species of this family are: *Wheat, Rye, Barley, Rice, Maize,* or *Indian Corn, Oats, Sugar-Cane, Sorghum,* and *Imphee.* From these plants, as is well known, our bread and sugar are mainly derived. To these genera and species may be added those kinds of grasses on which the whole family of ruminant animals principally subsist, viz: Timothy-grass (*phleum pratense,*) Blue-grass (*poa compressa,*) Red-top (*agrostis vulgaris,*) Panic-grass (*panicum nitidum,*) Millet (*milium effusum,*) Fescue-grass (*festuca pratensis* and *elatior,*) Broom-grass (*bromus pubescens,*) Beard-grass (*andropogon nutans,*) and numerous other varieties of the genera above named, as well as many other genera. The plants are herbaceous, with few exceptions, as the *Bamboo,* which has the hardness of wood. Botanists have enumerated more than 300 species of the grasses in the United States, notwithstanding which, those varieties commonly cultivated here for fodder, are of European origin.

Within the northern polar circle, agriculture is found only in a few places. In Siberia grain reaches at the utmost only to 60°, in the eastern parts scarcely to 55°, and in Kamschatka there is no agriculture even in the southern parts about 51°. The polar limit of agriculture on the northwest coast of America appears to be somewhat higher; for, in the more southern Russian possessions, (57° to 58°,) barley and rye come to maturity. On the east coast of America it is scarcely above 50° to 52°. Only in Europe, namely, in Lapland, does the polar limit reach an unusually high latitude, (70°.) Beyond this, dried fish, and here and there a few potatoes supply the place of grain. The grains which extend farthest to the north, in Europe, are barley and oats. These, which in milder climates are not used for bread, afford to the inhabitants of Norway and Sweden, of a part of Siberia and Scotland, their chief vegetable nourishment. Rye and spelt are the next which become associated with these. Rye is the prevailing grain in a great part of the North Temperate zone, namely, in the south of Sweden, and Norway, Denmark, and in all the lands bordering on the Baltic, the north of Germany, part of northern Russia in Europe, and part of Siberia. In the latter, another very nutritious grain, buckwheat, (*polygonum fagopyrum*) is frequently cultivated. In the zone where rye prevails, wheat is also generally to be found; barley being here chiefly cultivated for beer, and oats supplying food for horses. To these there follows a zone in Europe and western Asia, where rye disappears and wheat almost exclusively furnishes bread. The middle or the south of France, England, part of Scotland, a part of Germany, Hungary, the Crimea and Caucasus, as also the middle lands of Asia, where agriculture is followed, belong to this zone. Here the vine is also found; wine supplants the use of beer, and barley is consequently less raised.

Next comes a district where wheat still abounds, but no longer exclusively furnishes bread; rice and maize, or Indian corn, becoming frequent. To this zone belong Portugal, Spain, part of France on the Mediterranean, Italy, and Greece; also the countries of the East: Persia, Northern India, Arabia, Egypt, Nubia, Barbary, and the Canary Islands; in these latter countries, however, the culture of Indian corn or rice towards the south, is always more considerable, and in some of them, several kinds of sorghum (*Dowra*), and *Poa Abyssinica,* come to be added. In both these regions of wheat, rye only occurs at considerable elevations; oats, however, more seldom, and they at last entirely disappear; barley affording food for horses and mules.

In the eastern parts of the temperate zone of the Old Continent, in China and Japan, our northern kinds of grain are very unfrequent, and rice is found to predominate. The cause of this difference between the east and the west of the Old Continent, appears to be in the manners and peculiarities of the people. In North America, wheat and rye grow as in Europe, but more sparingly. Indian corn is more raised in the Western than in the Old Continent, and rice which is cultivated to considerable extent in South Carolina, Georgia, and in the Gulf States.

In the torrid zone, Indian corn predominates in America, rice in Asia, and both these grains in nearly equal quantity in Africa. The cause of this distribution is, perhaps, historical; for Asia is the native country of rice, and Indian corn is indigenous to America, and probably also to Africa and Asia. It is true that most writers who have mentioned this plant have maintained that America is its native region; but no botanist has ever found it here growing wild; but the Landers found it extensively cultivated all along the river Niger in Africa 500 to 1500 miles from the ocean.

N. P.

Hudson, Ohio.

For the American Agriculturist.

Benefits of Rotation.

A correspondent of the Country Gentleman from Wisconsin thinks rotation is unnecessary, from the fact that he has raised potatoes with improving crops each year, for four years successively. This is one of the cases where "a little learning is a dangerous thing." There is no principle better established in modern husbandry, than the necessity of rotation to secure maximum crops. The eminent success of British farming rests upon this practice. It is quite possible that in a virgin soil, the same crop may be grown with success for years in succession. But this does not invalidate the principle. Cultivation soon uses up a virgin soil (except in bottom lands,) and nothing but rotation can keep up their fertility during a long period of time.

On a piece of reclaimed land where we got 220 bushels of field beets in 1860, we this year gathered only 127 bushels. The land had manure enough and careful tillage. The result we have no doubt was mainly owing to a repetition of the same crop. On a piece of garden soil where we gathered thirty eight bushels of carrots in 1860, we raised this year less than twenty bushels. The soil was rich with manure, but had been in carrots four years. On another patch where potatoes had been grown with carrots as a succession crop, for only two years, there was less than half a crop. On another piece of meadow that had been in grass for a generation, potatoes were planted five years in succession. They did very well for three years. The yield the last season was not more than half a crop, though manured broadcast and in the hill. These facts show pretty conclusively that the soil demands a rotation. It may be doubted whether the exception, usually made in favor of the onion crop, disproves the rule. It is well known that wood ashes are a favorite fertilizer for this crop, and that the lime and potash in them are alkalies, and prepare plant food very rapidly for the use of the crop. But even with this aid, the maggot and other diseases are making their appearance in the onion districts, and very much diminishing the profits. May not the trouble be owing in part to the practice of compelling the onion to live upon its own decay, as it must where the same land is used for this crop for a long course of years.

In virgin soils, or those that have lain in grass for a long period, it may be economical to repeat a crop, but as a rule there should be a change of crops every year. Whatever may be the philosophy of the fact, it will hardly be disputed that all crops do better in rotation. Plants seem as fond of a change of food as animals.

CONNECTICUT.

An Englishman on Peat.

In a recent number of a leading British magazine, the Editor grows eloquent over his "newly discovered" uses of peat. He speaks of what the majority of American farmers have long known, as follows:—"Dry peat has been discovered by an eminent agricultural professor of chemistry as a good deodorizer of offensive putrid substances; it possesses the wonderful disinfecting properties of charcoal; and by mixing with common night soil in about equal proportions, makes a valuable manure, not inferior in its results to the best South American Guano." He says that when thus prepared, it may be used as a top-dressing, or be drilled, or dropped in with seed, at the rate of 700 to 800 pounds per acre, and may be used for every known crop, for the garden and for the lawn. Pulverize peat and strew it over the floors of stables, piggeries, or cow-houses, with a thin covering of straw over it, to keep the animals clean, and it will disinfect the buildings and absorb all the liquids which would otherwise waste.

Wherever there is a small nuisance of any kind, a cess-pool, sewer, water-closet, vexatious kitchen drain, etc., treat the same with peat. Let every cottager possess himself of a barrel or two of this article, and his little domain will thrive like a green bay-tree. "From the palace to the hovel, let this grand renovator and purifier be," etc., etc. Our trans-Atlantic cotemporary goes on in a very grandiloquent style.

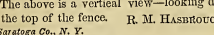
Fence for Wet Lands.

To the Editor of the American Agriculturist.

The *best* fence which I know of for land that "heaves," is made in panels four boards high, the boards nailed with *twelve-penny clinch* nails, to three strips of white pine plank (1¼ or 1½ inches thick. The panels are held up against the posts by binding with number 8 *annealed* wire. No middle post is required. If hemlock boards are used, a brace and bit are necessary to bore through the boards at the ends, to prevent splitting. The posts being sharpened when set, they can be driven back if they heave, without injury to the fence. The above is from an experience of nine years with different kinds of panel fence. It is easily and quickly made, is cheap, not patented, and is the *best* portable fence I have ever seen, if I did invent it myself.

I have also tried all sorts of ways for nailing

boards and plank to fence-posts, and have become satisfied that where service and not show is required, the *best* manner is as follows:



The above is a vertical view—looking down at the top of the fence. R. M. HASBROUCK.
Saratoga Co., N. Y.

Horses Injured by Hungarian Grass.

As has been previously stated in the *Agriculturist*, from all the evidence received, there appears to be no peculiar property in millet or Hungarian grass which makes it hurtful to horses, or other stock; but injudicious feeding of the ripened seed with the stalk may be injurious. The following item from the Prairie Farmer refers to this matter. A gentleman having grown and fed considerable of this grass to his stock last season, several of his horses beame stiffened and almost useless. One, a fine mare, died. To ascertain what ailed her, he opened and examined her thoroughly, and found in her stomach a ball of Hungarian grass seed, weighing from seven to eight pounds, so hard as to be broken with difficulty. Acting on this discovery, he gave his other horses a dose of castor oil, and very soon, masses of seed were passed from them, apparently parts of the balls described, some pieces as large as hens' eggs.

If this be the difficulty, it may be prevented by steaming the grass and seed before feeding. As is well known, grain of any kind reaching the stomach unbroken by the teeth, is not easily digested, and whole kernels of corn or oats may often be found in the excrements of animals, as the poultry testify by assiduously scratching over the manure heap. Millet seed of every variety is so small as to be masticated with difficulty, and most of it will enter the stomach unbroken. Thorough cooking by steam will swell and soften the kernels, and prepare the grain to be readily acted upon by the gastric juice in the stomach of the animal. *

Diseases from Ammonia in Stables.

Nothing is more common than diseases among cattle, especially horses, arising from foul stables. Horses are more troubled with it than cows, probably from the fact that their dung is generally richer and undergoes a more rapid fermentation, throwing out ammonia in large quantities. In a close stable the gas is so strong that the eyes are painfully affected with it. This is an alkali, and is classed among the most powerful stimulants, the constant respiration of which, predisposes to affections of the lungs. The strength of the gas may be judged from the odor that arises from a common hartshorn smelling bottle. In many stables no provision whatever is made to guard the animals against this subtle poison. The floor is always saturated with urine, and the pungent odor of this gas is always present.

There are many cheap experiments within the reach of most farmers to prevent this nuisance, and to save the ammonia for the manure heap. As all the animals are now coming to the stables, particular attention should be paid to this item of economy. Common ground plaster is a good absorbent, and a few quarts sprinkled daily in the manure gutters, will keep them sweet and clean. Sawdust from the shingle and saw mill will make good bedding, and if renewed often enough, will retain all the ammonia. In most mills in the country, this article accumulates, and has to be thrown into the stream, to get rid of it. It may be turned to profitable account for bedding.

Some farmers living near tan works, use the spent tan bark for this purpose. If kept under cover and used in the dry state, it makes a very valuable manure. Shore farmers have an unfailing resource in sea weed, particularly the eel grass. If this is spread and dried upon the shore it makes a good bed, and has great power of absorbing gas. Better still is dry muck and peat kept housed for the purpose. A half cord of this under a horse with a little changing where the water falls, will keep a stable sweet for two weeks. This is within reach of most farmers, and is, perhaps, the cheapest and best method of enlarging the compost heap. Leaves gathered from the forest, or straw, make a suitable covering for the muck at night, and keep the animals clean. As ammonia is the most valuable constituent of the manure heap, it ought to be a point of honor with every cultivator not to have an ounce wasted. It is the very life of his business—good for the eyes of potatoes, beans and other plants, but very bad for the eyes of horses and cattle.

For the American Agriculturist.

Saddle Horses.

The present war times have given new value to saddle horses. They are wanted for military service, and then the prevailing martial spirit has caused our young men and maidens at home to learn and practice the noble and robust accomplishment of riding on horseback. Luxuriously cushioned and closely curtained carriages may do for the feeble and the effeminate; but to the young and strong, give the saddle and the bounding steed.

Aye, and more than that: the saddle is just the place for the feeble who wish to become strong, and who have the courage and perseverance to take this daily regimen. We speak what we have tried and do know, that for a pulmonary complaint, nothing is better than daily exercise on horseback. If the weather is cold, put on more clothes; if wet, then throw on a rubber overcoat; but sally forth once a day, and Dobbin will bring you home in better health and spirits than when you went away.

There is a great difference in horses. Some were born for the saddle, and are easily trained to it. Some are naturally awkward, long-paced, high stepping, making it a penance to ride them. Others again can be broken to the saddle only by careful training. With the latter, the work should be begun early. Care should be taken that a young horse get no fright by throwing on the saddle rudely, or by the rider's mode of mounting and dismounting. Vex him not by unnecessary roughness in putting the bits into his mouth. Let him not get the habit of starting suddenly at pokerish objects by the roadside; for a saddle horse, this is one of the worst of faults. And when he does get frightened, do not try to whip him out of his alarm; he will be all the more terrified next time.

Some horses have a good deal of style and carriage by nature; with others, it must come chiefly from training. Keep your horse from throwing his head very high, or dropping it very low. A little curve of the neck is very graceful. An ordinary snaffle-bit with a martingal enables one to manage the head successfully. In certain cases, it will not; and then the curb bridle must be resorted to. An occasional use of this will bring down a lofty head and an outstretching nose. And then, contradictory as it may seem, the same bridle skillfully used, will bring up a doggishly low head. But such a bit should not be used constantly, or it will lose its value.

The gait of a saddle horse is somewhat a question of taste, but a slow, easy gallop is, on the whole, the most popular. The natural gait of a horse (trot, pace, or gallop,) will be the easiest for him and his rider. A little management, such as tightening or loosening the rein, a motion of the legs or of the person, a slight whistle or chirrup, will soon be understood by the horse, and cause him to take the gait or speed desired. EQUESTRIAN.

A Harnessing Arrangement.

A correspondent of the Country Gentleman describes the following method of harnessing and unharnessing a horse to a single wagon: "In the first place, my harness is made with the collar open at the bottom, and no buckle, but the hames are fastened to the collar, and there is one buckle to fasten them both. The tugs and hold-back straps are not unhitched; the lines lie over the dash, where they will not get under the horse's feet; they may be unbuckled from the headstall, or remain with it, and all hang up together. I have a wooden hook, like an ox-bow, with half the length of one side cut off, so as to hook under the back saddle, collar, and headstall. A cord is attached to the long end of the hook, and put up over a pulley, and through another pulley, and down to about three feet from one side of the horse. Unbuckle the belly-bands and the hame-straps, put under the hook, pull all up, and make the cord fast to a small hook at the side of the carriage house. A horse will soon learn to place himself back into the breeching, when the harness and shafts are let down, three or four buckles are fastened, and he is harnessed."

Breaking Heifers for Milking.

This is often made quite a serious affair, in which kicks and bruises are freely interchanged between the frightened brute and the irritated master. Many an otherwise excellent milker is spoiled for life by harsh treatment. A heifer, if well broken to the milk pail, is thereby made worth at least twenty per cent more—an increase which will pay for much painstaking. Harey's reasoning respecting horses applies equally to other animals. They only resist when injury is apprehended, and their natural instinct suggests danger whenever any unusual treatment occurs. Every one has noticed how shy a creature is in entering strange enclosures, or at sight of new objects. The handling of a heifer's bag is to her a very unusual proceeding, and, in addition, the teats are often tender, and the bag caked and inflamed so as to be painful under even a gentle touch. Training for milking should commence long before calving. First teach the animal to welcome your coming by little presents of an apple, a handful of corn, or salt, or other delicacy. She will soon readily permit the hand to be laid upon her back and enjoy the gentle rubbing and scratching which may be given. Extend the handling to different parts of the body, until she will not flinch from grasping her teats, and the work may be soon accomplished without even a harsh word. This will be a good lesson for the boys to practice the present month, and teach *them* patience and kindness, in addition to the good effects upon the animals.

[PRIZE ARTICLE.*]

Winter Feeding and Care of Animals.

BY "BURICOLIST," OF ONTARIO COUNTY, N. Y.

"'Tis then the time from hoarding cribs to feed
The ox laborious, and the noble steed;
'Tis then the time to tend the bleating fold,
To strew with litter and to fence from cold."
DAVID HUMPHREYS.

I consider it self-evident that to winter stock *properly* and profitably, we must have at hand the *means* of doing so, viz: the proper quantity and kinds of fodder, and convenient buildings. It would, however, be out of place here to enter on the subject of farm buildings, as there is no telling how far it might lead us.

The first point to be secured is the *health* of the animals, and for this sufficient room and good ventilation are indispensable. Warmth is less important to stock than ventilation, and as yet the great mass of our farmers are not awake to the importance of ventilating even their own *houses*. All barns and stables need *ventilators*, as outlets for the foul air, and the same should by all means be provided for every building which is used for live stock of any kind. Where ventilators from stables pass

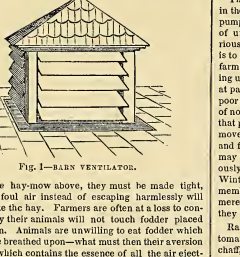


FIG. 1.—BARN VENTILATOR.

through the hay-mow above, they must be made tight, or else the foul air instead of escaping harmlessly will contaminate the hay. Farmers are often at a loss to conjecture why their animals will not touch fodder placed before them. Animals are unwilling to eat fodder which others have breathed upon—what must then their aversion be to that which contains the essence of all the air ejected from the lungs of ten, twenty, or thirty animals.

[Ventilators need protection from the weather and uninterrupted escape for the air. Fig. 1 shows a common and good form. Fig. 2 is Emerson's ventilating cap—a form for the end of a ventilating trunk carried out above the roof; it is made of "galvanized" or zinc-coated sheet-

Fig. 2.

iron, and crested, when there is a little wind, a strong draft.]

Next in importance to ventilation is *room*. A false idea of economy prompts many to crowd their animals into half of the room they require. It is far better to err the other way. There are many days during the winter when the weather will not warrant our turning stock out any longer than may be necessary to water them and to clean out their stables; and when we not only deprive them of exercise, but cramp them up in stables so that they have hardly a chance to move either way, we can not expect to meet with success in winter feeding.

Warmth is desirable in farm buildings, provided its introduction in no manner interferes with the perfect ventilation of the same. It makes but little matter how tight you make the floor, sides and roof of your stable, provided there be an ample supply of fresh air and a proper outlet for the foul. The animal heat, from the stock, will make a warm stable if the cold blasts are shut out by matched siding or battens, and the ice and snow kept from intruding under the eaves and through the cracks in the roof. Paint must be used carefully around buildings—cases of death from licking fresh paint are by no means rare. Farm buildings should be convenient, and although roomy, they must be compact or else many steps will be taken that might otherwise be avoided. Have your hay, meal and roots close at hand so as not to carry them far. Not only is time wasted in so doing, but in the course of a season a considerable amount of hay and most of the heads and seed, which the cattle like best, are lost. I regard the straw and root-cutters indispensable tools to every economical farmer. As for root-cutters I have never seen an American-made one that did the work to suit me, but I know of one imported from England which is all that can be desired except in price ($50).

NEAT CATTLE.

In speaking of the wintering of cattle, we of course refer to their treatment from the moment they are put up in the stable in the Fall until they are turned out to pasture in the Spring. Pasture generally grows short for cattle, especially milch cows and cattle which it is intended to fatten during the Winter, as soon as September. When this occurs, a little hay and grain should be fed, even before it becomes necessary to confine the stock to the stall, and as pasture gets more and more scanty the feed should be increased by degrees, until it is time to shut them up. In spring do not turn out early; they will injure the growing grass, while it will be insufficient for their wants and yet destroy their relish for hay.

We have then to consider the treatment of milch cows, breeding cows, fatting cattle, oxen and calves, from September to May—seven long months. What shall we feed them, and how shall we feed them, in order to promote their growth and health, and to atone for the loss of free exercise and fresh vegetable juices which they have during the summer?—A question which, well pondered, will dispel the illusion that it does not pay to winter cattle.

The first fall-feed cattle usually get, is pumpkins fed in the yard, and eaten, seeds and all. This is all wrong—pumpkin seeds are diuretic, that is, promote a secretion of urine, in fact, a regular medicine and therefore injurious to a healthy animal. The tendency in milch cows is to reduce the secretion of milk, and the unrelenting farmer will be surprised to find his cows suddenly "drying up." Cattle which have access to pumpkins when at pasture will neglect the grass and will inevitably grow poor as the pumpkin does not contain the requisite amount of nourishment to supply their wants. I therefore hold that pumpkins, if fed at all, should have all their seeds removed and should then be passed through the root cutter and fed with hay, straw, or stalks and grain, as the case may be. Any falling off in flesh in the Fall is to be studiously avoided, and if allowed to run down in the Fall or Winter it will take a long time for them to recover. Remember the adage, "cattle well wintered are half summered." As soon as cattle are put in winter quarters they require the constant attention of some one man.

Racks provided for yard feeding, although it is not customary, should have *tight floors* so that cut hay, straw, chaff, pumpkins or roots may be fed without waste. It is often necessary to move the racks during the Winter in order to spread the manure evenly over the yards and to keep them at the proper level; and owing to the difficulty of finding clean places to set them down, the floored racks are of great advantage as the food placed on them is not rendered disagreeable to the animals by the gases exhaling from the manure beneath. Fig. 3 is a plan of the style of rack I have adopted and which I consider the best of the many styles in use. The corner posts should be 4 inches square and the braces stout inch boards—the boards should be nailed on the inside and with wrought nails clinched so that in throwing their heads around, as cattle are apt to do when eating, they may not force any of the boards off as they would be likely to were they nailed on the outside. Pieces of two inch plank nailed across the ends support the floor which is of inch boards.

The general rule is to give the poorest feed first and so keep gradually improving—and it is a good rule so far as it goes; but to take cattle up in the Fall and give them nothing but coarse dry straw is absolutely cruel. As for young growing stock they should have the best fodder the farm produces all the year round. Remember that the

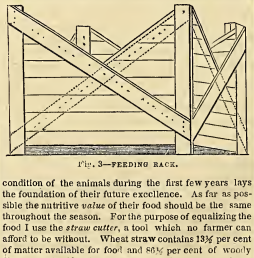


FIG. 3—FEEDING RACK.

condition of the animals during the first few years lays the foundation of their future excellence. As far as possible the nutritive *value* of their food should be the same throughout the season. For the purpose of equalizing the food I use the *straw cutter*, a tool which no farmer can afford to be without. Wheat straw contains 13½ per cent of matter available for food and 8½ per cent of woody fiber and ash; if fed alone therefore it requires a large amount to furnish the requisite nourishment. But if cut up and mixed with hay, roots and meal, it will not only go to nourish the animal, but the very woody fiber, before useless, will counteract the effects of the otherwise too concentrated food. As, however, this kind of feeding can not be managed well unless each animal is fed according to its age, condition, etc., it becomes necessary to provide separate mangers for each. Will our farmers never learn the *profits* of stabling cattle? Except here and there one, they leave their cattle in open yards, or worse yet, in open fields to shift for themselves, throwing them

FIG. 4—STALL FASTENING.

daily, bundles of corn stalks or straw, and giving them access to a trough full of ice, which they call water. Did they but know what an increase of milk they would obtain (one third more at least,) that shelter is cheaper than fodder, and that manure thus made under cover is much more valuable than that which is washed and wasted by every storm, they would, I am sure, immediately change their practice.

The shape and size of the stall is a matter about which every one has his own notions, as also about the best mode of fastening the animals therein. Of all fastenings I consider wooden stanchions the worst, for, besides galling the animal's neck, they prevent its moving its head either way and in fact almost preclude *all* motion. The form of fastening which I like best, is a bent iron rod attached to the side of the stall, as shown in the annexed sketch, (Fig. 4). On this is a ring sliding up and down, to which is attached a chain which goes around the animal's neck. *Two* rings, or links rather larger than the rest and placed side by side allowing the "*key*" to pass through each, make doubly sure, (Fig. 5). This two-ring arrangement is an invention of my own, but it is so simple that I doubt not others have made use of it long ago; I feel sure that no one who has is troubled with cattle getting loose.

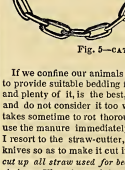


FIG. 5—CATTLE CHAIN.

If we confine our animals to stalls it becomes necessary to provide suitable bedding for them. Good clean straw, and plenty of it, is the best, if you have enough to spare and do not consider it too valuable for this purpose. It takes sometime to rot thoroughly and we often want to use the manure immediately. To obviate this difficulty I resort to the straw-cutter, and taking out two or three knives so as to make it cut in lengths of 3 or 4 inches, *I cut up all straw used for bedding*. The advantages are obvious. There is much less waste of bedding in cleaning out the stable. Cut straw absorbs liquids much more readily and consequently rots rapidly. As soon as the clover seed is thrashed, (and we usually try and thrash it as early as possible so as to save the wheat, oat and barley straw), I use the clover chaff for bedding and find it superior to almost anything else. The clover straw not fit for feed is cut up and used for bedding. Spent tan-bark, sawdust, and even muck, are all good bedding materials, but bedding of some kind I consider necessary for the health and comfort of animals, and have set my face against "*sparred floors*," Alderman Mechi, 'or any other man,' to the contrary, notwithstanding. The quality of the manure is a matter of no small importance; let any one try my plan for the thorough incorporation of long and straw, and see if the results will not pay better than those obtained from coarse straw which forms the chief constituent of nine tenths of the manure made hereabouts.

With our cattle well bedded, sheltered and furnished with plenty of pure air, we need but one more thing to put them in a state in which every ounce of food will "tell." This one thing needful is an external application composed of:—Curry-combum, Thorough-brushum, Elbow-greasum, of each *q. s.*, mix and apply in early morning daily. The cards and curry-combs must be kept moving. Cattle need and profit by their use fully as much as horses, even in Summer. Cattle *must* be kept clean; filth, and irritation from impurities and vermin, cause them to lick themselves inordinately, and the hairs, thus taken into the stomach, in time form compact masses which sometimes destroy the animals. If you have never tried it, you will be surprised to see how it will improve an animal's looks as well as its health. All animals

* The Committee to whom was entrusted the examination of the Essays on Feeding and Care of Animals, after careful examination unanimously decided to award the prize of $20 to "Buricolist." There were several other very good articles offered, but this is the clearest and most complete.

like it and it is good for all, from man down wards. It also accustoms young cattle to being handled and helps to make them kind and gentle. Besides, it acts as a preventative against lice. Should these pests appear, I recommend alcohol rubbed in along the back and infested parts; if very strong it should be diluted with water.

The straw-cutter has a busy time of it with me. As I have already hinted, I cut up every thing, both bedding and feed; straw, hay and corn stalks, all have to pass through the cutter. I found this paid when it cost me $5 a day to hire it done, and I have since found that it pays still better now that I have a machine of my own. I use straw with hay or stalks, and prefer mixing as it is cut, for I can do the work much more thoroughly. The mixture should consist of two parts or more of straw to every one of cornstalks or hay. The straw keeps the pile from heating, for which purpose, as also for the bene-

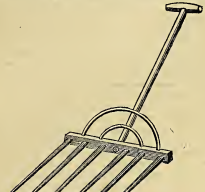


Fig. 6—CHAFF FORK.

fit of the animals' health, an occasional handful of *fine* salt should be scattered over it. Be careful not to cut too much at once, as I have several times done and lost my whole pile of feed in consequence.

The animals will do better for an occasional change from hay to cornstalks, and vice versa, it helps keep up their appetite; this may also be done by changing from one kind of hay to another—from clover to timothy, from timothy to Hungarian, and so on. For handling cut feed I find a chaff fork very convenient. Any farmer can make one with a drawing knife and three-quarter-inch auger (Fig. 6). The handle should be 3 feet long and put in rather slanting; the tines are 2 feet long and 3 inches apart; the bows are of hickory, steamed and bent. Such a fork will take up a bushel or more of chaff or cut feed at once, and will be found useful for many purposes.

Do not feed too much at a time; feed often and in small quantities, and always let the last meal be eaten up clean before you give another. Give the first feed early in the morning—cattle are early risers and need early breakfasts. Have a good sized trough to mix your feed in and keep it scrupulously clean. Pour into this the number of baskets full of cut feed necessary, then throw in the allowance of cut roots and meal and incorporate the whole with your *hands*; hands were made before scoop shovels, and you can mix it more thoroughly, and *feel* when it is mixed.

For root feed I use beets or mangel wurzels, as I find I can obtain a larger yield of them per acre; the cattle seem to like them as well as any, if not better; they seem capital for fattening stock, and tend to produce milk in cows without imparting any unpleasant flavor to the milk. Their watery nature, however, necessitates a free mixture of dry food, and they have the disadvantage of making the butter look white. To remedy this I mix a few yellow carrots with the feed given to milch cows. Linseed cake ground, I think, makes the best meal, but the supply in this part of the country is limited, and corn and oats, in the proportion of two parts of the former to one of the latter, ground fine and even, I find makes a very good substitute, and as every farmer raises these two staples he will find it far more profitable to grind and feed than to sell them. For young stock I add to this mixture 4 qts. of pure flax-seed to every bushel of corn. The steaming of food, is a matter on which, I am sorry to say, I have no experience, but incline to the opinion that it will not pay for ruminating stock, especially where the matter would have to be placed in the hands of hired help. The danger arising from fire around buildings and the expense of fuel as well as the first cost of the apparatus, all combine to make me think that the operation will, perhaps, not pay, and if the feed is properly cut and mixed with roots, I feel inclined to risk the digestive powers of the animals to do the rest of the work without help.

As to the proper quantity to be fed to each animal, it is impossible to lay down any fixed rules. Some will starve on what would surfeit others. Milch cows will do well on from 3 to 6 quarts of meal, 2 pecks of cut roots, and 2 bushels of cut feed daily. Working oxen and fattening cattle will require an increase of meal, say 4 to 8 quarts, and a bushel of roots, whereas young stock require but a limited supply of meal and a half bushel of roots per day. Individual animals and the different breeds will differ greatly, and experience and watchfulness alone can make a successful feeder. The rule should be, to feed enough, but to beware of the other extreme; if an animal once gets cloyed it will receive a check which a month's feeding will perhaps fail to obliterate. Clean water with the ice carefully removed should be given three times a day. *Rock salt* should be placed in calf-pens and yards; the animals like it, and it promotes their health.

It is a common practice with many to manage their breeding cows so as to have them come in at the beginning of Winter as they then have more time to attend to the calves. This is, however, not judicious. The foundation of future perfection in animals is laid the first year, and especially in the change from milk to vegetable food, and the most delicate and tender kinds of grass should be selected and introduced in the calf-pen when the animal is a month and a half or two months old. As we seldom have grass fit for the purpose before the middle of April I endeavor to have the calves come in about the middle of February or the first of March, and generally drive the cows to bull as near the first of May as possible, allowing 283 days for them to go with calf. Heifers should not be driven to bull until they are nearly if not quite three years old. My practice is not to allow the calf to suck the cow at all, as it is more difficult to teach it to drink afterwards, and the cow misses the calf a great deal more if it is allowed to suck her even once. As soon as the calf is able to stand I milk the cow and putting milk on my fingers in the calf's mouth I hold his head down to the milk with my other hand, when he begins to suck I gradually withdraw my fingers. Sometimes a calf will learn to drink at once, and at other times it will never learn. For the first week the calf should be fed three times a day—as much but no more than it will take and seem to relish. The next three weeks warm new milk should be fed twice a day, and after that, plenty of warm scalded milk with fine oil or corn meal for two months longer, gradually tapering off towards the last so as to wean the animal when four months old. If you have patience to do it, it will pay to boil the oil meal in water, say half a pint of meal to a quart or more of water, and then mix the whole with the scalded milk. This porridge requires constant stirring to prevent its burning; it will, however, hardly pay to make it unless you have calves enough to make it an object to use an agricultural furnace. Bull calves not needed as bulls should be castrated when *one month* old. The ordinary way of doing this is by cutting. A simpler if not a better way, however, is to tie a string firmly around the scrotum near the body. In two or three weeks it will fall off of itself, and will heal far more readily than in any other way. Only the best calves should be selected for raising, and after you have once made up your mind which to keep, no offer from the butcher should tempt you; surely they are worth as much to you as to him. I have sometimes been troubled with calves having the scours; in such cases I have always found a raw egg or a little wheat flour mixed with the feed, and accompanied with careful management, a safe and sure remedy.

Begin to break calves when they are a month old by leading them in and out of their pens—if you take them young they will soon learn, and will never forget it, and the convenience of the practice must be tried to be fully appreciated. If you put it off too long, the first thing you know the animal will be stronger than you are, and you will have a hard job of it, if you succeed at all. Don't jerk and slash. Go gently but firmly—have a regular halter made small enough; if you depend on a strap around the neck, the animal will be very likely to get the start of you, which should by all means be avoided. If it succeeds once you may be sure it will try it again. It is a good practice to begin tying them up when young.

Great care should be taken to milk cows clean—do it three times rather than once a day; the less they are milked the sooner they will dry up. See that the milkers do their duty *in silence*, and let the milking be done *white the animal is feeding*. Be careful not to expose cows to drafts which may give them a cold and result in garget or inflamed udder. In case such an accident (?) should occur, a few drops of tincture of *Aconite** in water, and a piece of bread soaked therein and applied, is about as good a remedy as any. Steers intended for working cattle should, of course, be trained early—the more they are handled the better, and if possible they should be taught by the same man that is afterwards to have the management of them. Patience and perseverance are requisite. Working cattle when first put to work in the Spring become easily heated and liable to colds; do not put them at too heavy work at first and keep them out of drafts; in the Spring they are better kept up until the heavy labors of the season are over. Oxen have now fallen into total disuse in many parts of the country, but for many kinds of work they are fully equal if not superior to horses, and I regret that the limits of this article will not allow me to dwell upon the advantages that would result from their use.

* A very deadly poison and to be used with great caution.

THE SHEEP-FOLD.

"Now sacred Pales, in a lofty strain
I sing the rural honors of thy reign.
First, with assiduous care from Winter keep,
Well foddered in the stalls, thy tender sheep."
DRYDEN'S VIRGIL.

Although sheep, to thrive, need a range, *shelter* at night and during storms is fully as important, if not a great deal more so for them than for any other kind of stock. The reason of this is obvious. Nature has provided this animal with a thick, warm covering of *wool*. Now, although wool contains a certain oily substance, meant to prevent water penetrating through it, yet if long exposed to rain or snow this proves insufficient, and the wool becomes soaked, and, from its spongy nature, when once wet, stays wet, and often gives the animal a cold which terminates its existence. To prevent this calamity we must provide shelter for them. A good shed and a yard inclosed by a tight board fence placed so as to get the full benefit of all the sunshine, are requisite to winter sheep.

I annex a diagram of a sheep shed, (Fig. 7 & 8,) planned for my own use. The back and sides are boarded tight, and the front is composed of a series of swinging doors which may be hooked up in the day time and let fall at night. The floor has sufficient inclination for drainage. A feeding rack runs along the back from end to end, small doors from the outside affording a ready means of introducing hay into it. There are two or more ventilators in the roof and numerous *inlets* for air provided near the floor. The roof in front should come down to within four feet of the ground and be provided with a gutter. Such a building 10x30 would afford accommodations for fifty to

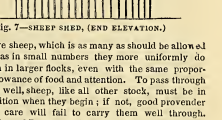


Fig. 7—SHEEP SHED, (END ELEVATION.)

seventy five sheep, which is as many as should be allowed to a flock, as in small numbers they more uniformly do better than in larger flocks, even with the same proportionate allowance of food and attention. To pass through the winter well, sheep, like all other stock, must be in good condition when they begin; if not, good provender and extra care will fail to carry them well through. After the first of December they should no longer be allowed to ramble over the fields, as it is poor economy to expose them to the inclemency of the season for the sake of what little food they can pick up. As early as October I begin feeding them a moderate allowance of roots, beets being as good or better for this purpose than

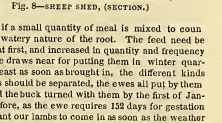


Fig. 8—SHEEP SHED, (SECTION.)

any other, if a small quantity of meal is mixed to counteract the watery nature of the root. The feed need be but small at first, and increased in quantity and frequency as the time draws near for putting them in winter quarters. At least as soon as brought in, the different kinds and breeds should be separated, the ewes all put by them selves, and the buck turned with them by the first of January or before, as the ewe requires 152 days for gestation and we want our lambs to come in as soon as the weather is settled in the Spring. The lambs and wethers should also be separated and divided in flocks, of which each member shall be as near of a size as practicable, so as to prevent the stronger from taking the lions share.

Sheep will sometimes have diarrhœa when first put in to grass, and fed on roots and hay; when potatoes are fed raw this will be almost sure to occur, as they possess loosening properties, and should never be fed in the early part of the season unless cooked. If diarrhœa shows itself it must be checked at once by administering a scruple of opium and two or three ounces of castor oil every other day, or if discovered soon enough, a dose of 2 pints of scalded flour two or three times a day will perhaps be better

Should sheep catch cold from exposure, and discharge matter at the nose, a little tar or pitch from pine boughs is the remedy. Should foot rot show itself, my remedy would be to sell out and turn to some other branch of stock raising, although John Johnston, the veteran tile drainer and sheep feeder, recommends paring the hoof and rubbing into the sores a salve of blue vitriol and lard.

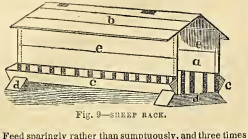


Fig. 9—SHEEP RACK.

Feed sparingly rather than sumptuously, and three times a day. Sheep delight in a change of food. Clover hay is perhaps better adapted to them than to any other animal, and from the large amount of nitrogen it contains will greatly enhance the value of their manure. An animal weighing 100 lbs. will consume about 3 lbs. of clover hay or its equivalent per diem. Straw may be substituted for hay as a change, the quantity being increased. A fat sheep will not consume as much in proportion as a poor one, and it will need no grain. Sheep should therefore never be allowed to fall off, and as soon as one becomes thin it should be at once removed to the hospital and fed well until it recovers; if once it reaches a certain point it will be past recovery.

Racks for feeding hay and straw should be upright, so as to prevent the seeds from falling into the wool about the neck. Fig. 9, is a section of such a rack. The hay is placed in the space *a*, and covered by the roof or lid *b*; *c*, *c*, are troughs to catch the seeds from the hay and for feeding meal, etc.; *e*, *e*, are tight boarded sides, and *d*, is a solid square piece of timber at each end which makes the whole thing set solid on the ground. Sheep *must* have water when confined to yards in Winter. In Summer they feed when the dew is on, and thus get the name of living without water, but the idea is erroneous. If your hay is not well salted, place a lump of rock salt in the yard where they can lick it; let nature regulate the quantity and they will not take too much.

Wethers which are meant to supply the winter market should be kept in the dark, and great care taken not to disturb them when feeding—they will thus be quiet and naturally lay on more flesh. Let them have a gallon of cut potatoes or beets every day, ½ or ¾ lb. of oil cake meal, which is superior to any other for sheep, and plenty of good bright clover hay. To each and handle them, carefully drive them into a small pen and you will accomplish it easily and without heating and exciting them.

A month or six weeks before ewes are expected to yean give them somewhat more food, being careful, however, not to get them in too high condition and thereby increase the risk in yeaning—½ gill of Indian corn a day to each is a good allowance. As the time draws near, give them warm shelter and plenty of bedding at night, and watch them closely so as to assist nature if necessary. Be careful what you feed in the shape of roots; turnips are said to affect the milk and injure the lambs. A part of potatoes or beets will not be out of place. Should they refuse to own their lambs, shut them by themselves till they will. If a ewe dies, feed its lamb with fresh cow's milk, and should a lamb of the same age die, clothe the orphan with its skin, and if not bloody, the ewe will at once take to it. Buck lambs should be castrated when from two to four weeks old, as the weather will allow. A simple incision made on either side for this purpose will heal most rapidly, but as this does not always afford sufficient outlet for the blood, it is best to cut off the whole lower portion of the scrotum.

PIG STY.

Of all farm stock, hogs are perhaps the most indispensable on account of their nearly omnivorous nature, and the ease with which they appropriate the refuse of the farm that would otherwise be lost. Hogs need a building for their accommodation as well as every other kind of stock. This may be small or large, as the means of the builder and the number of animals he may intend to confine dictate. A simple inclosure with a few boards placed across one corner is the simplest form of pen, and from that up to the magnificent piggery erected by Earl Egremont of England, there are of course many gradations. For confining hogs in Winter, a covered inclosure, if properly ventilated, is best. For sows and boars this will need to be larger than for fattening hogs, which latter only need room to move around. A plank or stone floor is essential for the sleeping apartment at least, for the sake of cleanliness and ease in throwing out the manure, a "chore" which should be attended to daily. It will also save a great deal more of the manure which is of more value than any other made on the farm. The hog is an uneasy animal; every thing about his dwelling must be made tight and strong, or he will give much trouble, by once in a while "breaking cover." Where practicable, stone walls are the best inclosures. When a building of considerable size is erected, it should have a cellar underneath for the purpose of storing roots, potatoes, etc., and meal bins and a corn crib overhead. (Figs. 10, 11, and 12). A good thick brick chimney and one or more ventilators should also be added. Iron or thick plank troughs, securely spiked to the floor, and an agricultural furnace are the necessary furnitures. Every mouthful of food should be cooked. In this part of the country we begin fattening hogs as soon as we begin to husk corn. The *soft* corn and *nubbins* are the principal food for about 3 weeks or a month, when hard corn, shelled and cooked, or what is still better, very thick corn meal gruel is substituted and continued until the animal is slaughtered. It is better to begin feeding in September as soon as the corn is cut, and the pumpkins can be got at, as the latter are excellent for hogs and enable us to *begin* fattening before the early frosts. An occasional mixture of charcoal with the food greatly strengthens and stimulates the digestive powers. This is undoubtedly the best way to make pork, but to feed

Fig. 10—PIG STY WITH CORN LOFT.

for market, corn is often worth too much; and although the particular flavor of corn-fed pork is easily distinguished and appreciated, yet it will seldom pay. Beets are hardly nutritious enough for fattening hogs, though they form a very good food for pigs from 3 to 4 months old; they are injurious to pregnant sows and to small pigs. Turnips or carrots, if boiled or steamed, do very well; but potatoes cooked and mashed, are superior to all other

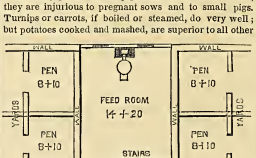


Fig. 11—GROUND PLAN OF STY.

food of this class. It will not pay to feed hogs long after the first of December. If properly managed they will then have laid on all the fat they are capable of.

The period of gestation in these animals is about 120 days, and, if properly managed, 5 litters may be produced in two years, varying from 5 to 16 pigs at a litter. It is very difficult to rear winter litters on account of the extreme susceptibility of the young animals to cold. We should therefore manage so as to have sows farrow early enough in the Fall, or else late enough in the Spring, that the pigs may be out of danger of severe cold. November is as soon as the boar should be turned in for spring pigs. Breeding sows need close watching when about farrowing both for assisting nature, if necessary, and to prevent their killing their young by lying on them, as they often do.

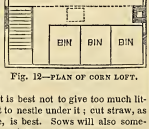


Fig. 12—PLAN OF CORN LOFT.

On this account, also, it is best not to give too much litter, as the young are apt to nestle under it; cut straw, as recommended for cattle, is best. Sows will also sometimes devour their young, and should have a small allowance of animal food, with ashes and charcoal, to satisfy their cravings. The young should be weaned when six or seven weeks old, and fed skim milk and swill until we are ready to fatten them.

Hog yards should be well covered with muck, chaff, or straw, so as to absorb all the manure. Muck is perhaps best, as it absorbs and retains most manure. No animal loves cleanliness better than the hog, and it is in fact necessary for its welfare, as the gross food it lives upon renders it peculiarly liable to attacks of vermin and diseases of the skin. Even brushing and carding them is beneficial and perhaps profitable.

THE HORSE.

Shelter, pure air, light, and care, are more necessary to the welfare of the horse than to any other animal, and if neglected he will show the effects much sooner. Horse stalls must be roomy, especially for breeding mares—six feet is about the right width. They must be well drained, the floor having a slight inclination to the *center* of the stall, where a grate communicates with a short drain connected with the main drain that runs the whole length of the stable, allowing the urine to escape readily. The floor should be tight, both for the purpose of saving the manure and to protect the horse from the cold drafts from beneath. No slide or rack should be permitted by which the horse will be annoyed by the dust from the hay; nothing will tend to give a horse the heaves so soon as this. Horses should be tied in the center of the stall, or they will be liable to drive more on one rein than the other. A report of the London Omnibus Company, shows clearly the value of cut-feed. "They use 6000 horses—300 are fed 16 lbs. *bruised* oats, 7½ lbs. *cut* hay and 2½ lbs. *cut* straw daily each, and the other 3000 with 19 lbs. unbruised oats, and 13 lbs. uncut hay apiece daily—making a weight of 36 lbs. fed to the first, and 32 to the second, and there was no difference in the amount of work performed—a reduction of the two, making a saving of 6 lbs. per day in feeding each horse, estimated at 5 cents a day, or $300 a day on the 6000." Unthrashed oat straw run through a cutter and mixed with cut hay forms a capital food for horses. Clover (as usually cured) is perhaps the most objectionable hay for horses, on account of its dust which will inevitably result in the heaves, unless it be thoroughly wet. If fed uncut, it should be wet and shaken up before putting it in the manger, and every stalk is thus moistened enough, which is not the case where it is put in the manger and a little water sprinkled over the top. If cut, it should be mixed with straw and roots or meal in the feed-trough, and the whole wet thoroughly. I could never succeed in making horses eat beets, although they are said to eat the yellow best if mixed with chaff. Carrots are the best for their use, and every farmer should raise a sufficient quantity to afford his horses a moderate allowance through the Winter. The sleekness they impart to the coat, and the improvement in the spirit of the horse, will amply repay the time and expense.

Condition powders are sometimes given to horses to help the heaves and improve their looks; they are hurtful, however, as they render the animal liable to take cold. The best condition powder I know of is an application of the currycomb and brush two or three times a day. Never attempt to clean the animal when eating, as it makes him inclined to bite and kick. The best way is to have an open shed where you can fasten him while he is groomed. The comb should be used rather lightly, as the horse's skin is tender; a thorough brushing should succeed and be followed by a good rubbing with a woollen cloth. This may seem a good deal of work, but it will pay. Horses when put to farm work should be groomed every night to alleviate soreness of muscle. Currying helps the circulation of the blood and opens the pores by removing the scurf skin. The mane, foretop, and tail, must be thoroughly combed, and the feet examined and cleaned to see that no stones or dirt accumulate. A recently introduced horse-shoe is in this respect good—the ground surface of the shoe is beveled so as to favor the ejection of stones, mud, snow, ice, etc. (Fig. 13).

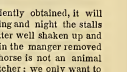


Fig. 13.

Bedding should be cut for horses as well as for other stock; they will sometimes prove troublesome by eating their bedding, in which case, if sawdust can be conveniently obtained, it will be the best litter for them. Morning and night the stalls should be cleaned out and the litter well shaken up and aired, and all the food remaining in the manger removed and replaced with fresh. The horse is not an animal that we want to fatten for the butcher; we only want to keep him in good working condition; if fed too much he will become "logy" and lazy. Breeding mares are usually at rest during the Winter. Their period of pregnancy is 11½ months, varying a few days as they grow older. They require about the same care as other horses during Winter, attention being paid to keep them from straining or jumping as the period for foaling draws near. They should not be used unless naturally very gentle. Colts should not be castrated during the Winter if it can possibly be avoided; from 4 to 12 months is the right age, and Spring is the best time.

POULTRY.

You can not winter poultry profitably without a building for the purpose; it may be a simple shanty or a build-

ing of tasteful architectural appearance. Before Winter sets in, this building should be whitewashed, and the floor covered with gravel; if you confine them to a yard the house must be kept whitewashed all the time. The principal care of poultry in Winter consists in preparation for market, and obtaining eggs—in the latter, few succeed. Shelter and warmth are the first requisites—then clean straw and whitewashed boxes for nests, and plenty of food. A supply of lime, ashes, gravel, corn, and *meat*, is necessary, and if these and plenty of *unfrozen* water be given, there need be little fear that eggs will not be plentiful in January. I seldom if ever give my fowls enough animal food during the Winter; in the Summer they scratch up worms and insects for themselves. To fatten chickens for market, confine in small coops, keep them quiet and feed on boiled corn or ground oats and milk—the secret is to feed often and but little at a time. If intended for a distant market they should be fasted for from twelve to fifteen hours before killing, or better yet, afterward filled with powdered charcoal. Judge Buel asserted that they may be kept for two months by pursuing the latter course.—Turkeys consume so much food during the winter that it will generally be found advantageous to dispose of them early. They may be all fatted together and killed, and then either filled with charcoal, as recommended for chickens, or frozen and kept so, this, however, some say affects the taste.

Having no acquaintance with the management of bees, I must, with these remarks, close this essay on the Winter management of farm stock, well aware that I have not done the subject justice; and I am sure few have sufficient knowledge of *all* the different animals to give perfect rules for the management of each. Each kind is a study to which alone a man may devote a lifetime. R.

For the American Agriculturist.

Too Much Fat.

MR. EDITOR.—The candle makers ought to pay some agricultural papers handsomely, and they could also well afford to *grease* a good many judges at Agricultural Fairs, for their efforts to make tallow and lard plenty. Thanks to the teachings and decisions of the above-mentioned authorities, the notion very largely prevails that the chief end of stock breeding and feeding is to make fat. Great stories are told of Mr. A's oxen which dressed ever so many thousand pounds, with an unheard-of amount of rough tallow. The public are invited to examine extra specimens of abundant tallow hanging in the stalls of the butcher who has paid premium prices for *the great fat steer*. When a farmer proposes to exhibit an animal at the Fair, he keeps a good path trod between the corn crib and the feeding place, and every ounce of fat he can crowd upon the creature's ribs, he counts as one more chance towards a favorable opinion of the judges. If pure fat were desirable food, all this would be highly commendable, but the fact is, comparatively few eat the unadulterated article, and most of it finds its way to the tallow-chandlers. A mixture of fat with the lean, is almost universally relished, and is not unwholesome; but an over-fed, enormously fat animal, such an one as attracts the gaping crowd, is not in a healthy condition, and can not furnish healthful food. It is the opinion of well informed men that many diseases arise from the excessive use of fat meat, particularly pork, which is common in this country. I believe it should be the aim of breeders to increase the quantity of meat upon an animal's bones, without striving to cover it with tallow or lard. An animal of vigorous constitution well fed—not stuffed—and properly exercised, will develop a large amount of muscle (good lean flesh), and by proper selection among such specimens for breeding purposes, this characteristic can be fixed in the progeny. JONATHAN.

AN ARTIFICIAL SOW.—The Mark Lane Express gives the following, from a correspondent: "A fine sow, having twelve sucking pigs, owned by a pork merchant in Monkwearmouth, died suddenly. The proprietor, who is an ingenious character, set to work and formed a rough model of a sow in wood, hollow in the center, and furnished with twelve teats formed of raw hide. The interior was filled with milk, and the young pigs took to it very naturally, and throve well!"

For the American Agriculturist.

How to get Good Crops.

Manure is the great secret of profitable farming. Skill and tillage are important in their places, but these avail very little without manure. With plenty of manure, we can get almost any thing we desire out of old land. Without it, we can hardly get pay for our labor.

To show the power of manure to produce crops and to make money, I will give the following statement of the treatment and produce of three quarters of an acre the past season.

The field was a worn out meadow, producing less than half a ton of hay to the acre, and had received no manure in twenty years, except from cattle pastured in it. The soil was a gravelly loam, and the subsoil a yellow loam of good quality. About thirty dollars' worth of manure was taken to the field during the winter, principally night soil and hog dung. This was spread and plowed in in the Spring. At planting time a compost was prepared of one hundred and fifty pounds Peruvian guano, a cord of muck, and a half cord of night soil, for dropping in the hill. This was mixed three weeks before planting, and put in a pile under cover.

The lot was plowed about seven inches deep, and harrowed, and planted April 15th, with Wendell's Seedling potatoes, putting a handful of the compost in the hill. They came up in about three weeks, and as soon as the ground began to crack with the young shoots, the whole piece was run over with a light horse harrow, destroying every weed. This was equivalent to once hoeing, and gave the crop a good start. About the middle of June, the spaces between the rows were planted with beans, cabbages, and sweet corn for a succession crop. The potatoes were dug from the first to the twentieth of July, when the succession crops had the field. The cabbages were nearly a failure, owing to depredations of worms, the last of July. As the corn began to give ears the last of August, the spaces between the rows were sown with white turnips—cowhorn, strap leaf, and other varieties.

The receipts were 84 bushels potatoes—Sold at from 80 cents to $1.20 a bushel, averaging $1....	$84.00
Beans and Cabbages.....	2.00
Sweet corn sold at 10 cents a dozen.....	20.00
Rock turnips, 30 bushels—sold at 32½ cents.....	13.00
White turnips, 20 bushels—sold at 20 cents.....	4.00
White turnips, 50 bushels, for feeding, at 10 cents..	5.00
Total from three-fourths of an acre	$128.00
The expenses of the crop were—Rent, $10.00	
Manure 40.00	
Labor..... 25.00	
	$75.00

This shows a profit of $53 on three quarters of an acre of land. If we reckon one half of the manure only as expended upon the crop, as is common, it will make twenty dollars more added to the crop this year. There can be no doubt that the land is in much better condition than before it was broken up. This statement is not given as an example of large productiveness, or extraordinary profit for market gardeners who have the conveniences for forcing and more abundant manuring. But it shows what may be done by farmers in the vicinity of good markets, by a little extra pains. Early potatoes, early planting, and high manuring, will make at least a difference of three weeks in getting potatoes to market, and this adds about one half to the price. Potatoes that go quick at one dollar and a half a bushel July 4th, are worth but seventy five cents a month later. A great many acres conveniently situated to market, might be easily made to double their productiveness and their profits. PRACTICAL.

Ice for Use and Ice for Sale.

The ice crop is every year becoming more important—no longer regarded as an article of luxury and an accompaniment of sumptuous living, but a necessity of life and trade. To our milkmen and butchers, in public and many private houses, especially in hospitals and sick rooms, it is *daily bread*. Our navy consumes immense quantities of ice also, and just so far as our commerce is re-established in the South, will the demand increase, while we at the North are annually increasing the home consumption of the article, in a ratio which often more than realizes the expectations of those upon whom the public depend for a supply. Should a general opening of trade with the South not occur until late in the Spring or Summer, the demand for ice at large prices will be very great, and the price at points on the coast favorable for shipping will be greatly increased, unless a large supply is stored this Winter to meet this very emergency.

Ice, to keep well, must be stored on dry ground, and protected from the sun, from rain, and from a circulation of air. The smaller the mass of ice the more thoroughly must these conditions be met. A house twelve feet square, double boarded, with a space of 10 or 12 inches filled with sawdust between the boardings, well roofed, and shaded from the mid-day sun, and situated on dry ground, and well drained, will keep ice well enough for a family, though the waste will be considerable. When ice is packed very closely and in very *large* quantities, a thatching of straw and hemlock boughs will be relatively quite as effective. The use of boards or rails to keep this protection in place, will be found advantageous, and it should be so disposed that rain will be completely shed; and all water, whether from rain, thawing of the ice, or other sources, must be carried away in surface drains around the outside.

Places Wanted on Farms for Boys.

Scarcely a day passes without inquiries addressed to the Office of the *American Agriculturist*, in person or by letter, from business men who wish to place their sons upon farms with good intelligent cultivators, where they may learn both the theory and practice of farming. Many of these business men are able to purchase farms for their sons, but wish first to give them a preparation. A majority of them are willing to pay liberally for board, and oversight. Others desire their sons to work nearly or quite enough to pay their board. Now we think it would be for the mutual advantage of all concerned, if a considerable numbers of farmers of the right class, would take these boys; few of them are unruly, but most, quite the contrary. We will take it as a favor if any of our readers who know of good locations for boys on farms under good cultivation, where they could be taken into the family, will let us know the name and address of the farmers to whom application can be made. Such letters we will place on file to be referred to by those who may hereafter make inquries of the character referred to.

French and German Asters.

The engraving presented herewith exhibits, so far as can be done in black and white, the appearance of a beautiful bouquet of Aster Flowers shown at the *Agriculturist* office recently, by John Wesley Jones, of Columbia Co., N. Y. One can hardly have an idea of the real beauty of these flowers, without seeing the blooms themselves, or a *colored* picture of them, showing the brilliant crimson, purple, blue, etc., with the intermediate colors. For the purpose of raising seed for distribution to our subscribers, we sowed nearly ¼ acre with these *improved* asters, and never have we seen anything more beautiful in the floral line.—Perhaps no flower has undergone more changes and improvements within a brief period, then the aster. The single ray of "red, white, or blue," has given place to the full quilled, Giant Emperor, Chrysanthemum flowered, Ranunculus or button formed, Pæony perfection, etc., with every shade of color, running from pure white to lilac, pink, and crimson; and from light lavender to deep blue, with the various shades intermingled in the same flower. Then in size, they range from the dwarf ranunculus-flowered, scarcely three-fourths of an inch in diameter, and growing on a stalk less than one foot high, to the giant sorts on three to four-feet stalks, with flowers two to three inches or more in diameter, and resembling the pæony in form and size, but greatly excelling it in beauty of petals. These great changes have been brought about by carefully selecting seeds of the finest blooms, and giving them high culture, so as to change the *stamens* into *petals*. French and German florists, conspicuous among whom is M. Truffaut, have brought about these "improvements," and made this one of the most desirable flowers. Besides being one of the prettiest annuals, the aster is of very easy culture. It will flourish in any good garden soil, and may be sown in the open ground at any time in May, or June even, covering with one-fourth inch of finely pulverized soil. They are best sown in drills, 15 inches apart, or thinly massed in small plots, with the tallest sorts in the center. When practicable, it is desirable to sow a portion of the seeds in pots, under glass, early in April, or the last of March, and then transplant them into the open ground, in the border and elsewhere, when the ground is warm, and the weather settled. These, with seed sown in the open ground in May and June, will furnish a succession of beautiful blooms all through the Summer and Autumn, until severe frost cuts them down. It is unfortunate that the finest blooms supply so little seed for wide diffusion. The petals or flower leaves in the most double sorts nearly or quite fill up the center, leaving little space for seed.

Nos. 1 and 5, Chrysanthemum Asters.
Nos. 3 and 4, Globe Quilled Asters.

Nos. 6 and 9, Bouquet Pyramidal Asters.
Nos. 2, 7, 9, and 10, Truffaut Pæony Asters.

A BOUQUET OF FRENCH AND GERMAN ASTERS.

Drawn and Engraved from the Flowers, as shown at the Office of the American Agriculturist, November, 1861.

Use of the Pruning Knife during Winter.

Mild weather in Winter is the pleasantest time for pruning, because we then have more leisure and can work more deliberately, because we can see every part of the tree, and because there is nothing on the ground to be injured by the feet, or by the falling branches, or their removal to the wood pile. It is the experience of every body who has pruned ornamental trees, and especially apple trees much, that sometimes the scars will heal, and sometimes they will not—the wood often becoming soft, and penetrated by decay, and finally, seriously injuring the tree. It will be found that a limb less than two inches in diameter will seldom make any trouble in this way. Large limbs cut in the Winter, and particularly toward Spring, will bleed, often profusely, so soon as the sap starts. The sap in early Spring is very fluid, and has the property of "scalding," that is, killing the live bark upon which it flows in any considerable quantity. Thus we often see where a large limb has been cut off, a decayed hole and a strip of dead bark or bare wood for a yard or more beneath. After the leaves put out in the Spring, the sap becomes thickened and sluggish in its motion, so that when the first evaporation takes place on the fresh cut surface, none will flow out, while the wood itself remains hard and impervious to water, and the scar, however large, gradually heals over. On the whole, therefore, we advise never to cut off large limbs except after blooming time, though these may be partly lopped off, and reduced in size in Winter, so as to be conveniently removed altogether in May or June. To debar oneself the privilege of doing any winter pruning is, we find, to crowd work terribly in Spring, and to make this otherwise pleasant labor a trial and a bugbear.

Pruning Grape Vines, and letting them Grow "Naturally."

A friend asks if the whole system of pruning the vine is not unnatural and mischievous? It *is* unnatural, but it is equally unnatural to raise such fine fruit as we do by this means; and you will not therefore object to the fruit, we imagine. If you insist on natural vines and natural fruit, go into the woods, and climb the trees for the small, sour, hard clusters. And if you don't come home feeling somewhat unnatural in the stomach, we will yield the point.

To get large and handsome fruit, we enrich the soil; but this also induces an overgrowth of canes, which must be checked by pruning; and to restrain this overgrowth most effectually, we must of necessity prune some in Summer.

Our friend admits that there is some sense in Summer pruning, "for that sends all the strength of the vine (he says) into the clusters, and lets in the rays of the sun upon the fruit."

But are you not a little too fast here? How does cutting off the foliage send the strength of the vine into the fruit? It is an accepted fact, that the clusters get their growth and flavor through the action of the foliage. As well take away a man's stomach and lungs, that so he might get strength! And as to letting in the sun on the clusters—why does Nature take such pains always to cover up the clusters? Have you not observed that the fruit ripens in the shade of the foliage just as quick as when exposed? If you wish to make your berries small, and sour, and to keep them from ripening, then strip the vines of their leaves almost entirely. If you wish them to be large and to ripen early, then give the vines a moderate Summer pruning, consisting chiefly in rubbing out all superfluous shoots as soon as they appear, and in pinching off the fruit-bearing branches three or four eyes beyond the last cluster.

Daphne Cneorum.

This is a beautiful little *evergreen* plant, growing about one foot high, and forming a dense mass of foliage, which is covered the greater part of the Summer with small purple flowers, that give forth the most delightful fragrance. It is perfectly hardy, withstanding our coldest Winters without injury. If there is any one plant better deserving a place in the garden than another, it is this beautiful Daphne. It will grow in almost any good garden soil; but one composed partly of leaf mold is the most suitable. It is easily transplanted while young, but the old plants are very impatient of removal. It is propagated by layers, which should be put down in the early part of the Summer, or like other evergreen plants, at the time it is making the most rapid growth. The best mode of making the layers is shown on page 131 of the May *Agriculturist* for 1860. The plants have been somewhat scarce, but nurserymen are turning attention to their propagation, and they will ere long become abundant, and we shall hope for their wider diffusion. The poor mountaineers of Tyrol and Switzerland bring large quantities of this plant to the villages, and sell it in little nosegays, under the German name of Stein Rœslein, (rock rose).

No Glut in the Fruit Market.

Some fifteen years or so ago, the prediction was continually made that, in ten years' time, there would be a glut in the fruit market. Nurserymen were advised to wind up their affairs and get out of the business in time, or they would soon have no customers for trees. Farmers were counseled to refrain from planting orchards, for it was predicted that even choice fruit would not sell at good prices. There was then quite a little panic, here and there.

But how has the event proved? Trees have continued to be planted from that day to this, and they are all wanted. Many have died from the neglect and carelessness of orchardists, and from the vicissitudes of the seasons. The market for fruit has continued to enlarge. There are millions of mouths to be filled now, where, twenty years ago, there were thousands, and more people appreciate choice fruit. They have found out that it is healthy food, and that it is cheaper to pay the apple-man's bill, than the medicine-man's. Then, too, the foreign market has been brought to our very door, within the past fifteen years; it is now only eight or ten days off, with an unlimited demand. It rarely happens that apples, our most common Summer fruit, are so cheap that even every well-to do family can afford to use them with entire freedom. Abundance in one locality usually counterbalances scarcity somewhere else, and prices are generally maintained.

The market glutted? Send on your fruit! Plant orchards, and take care of them. Raise fruit in variety, early and late. If you are within easy reach of a city market, raise the smaller fruits, strawberries, currants, raspberries, grapes, cherries, peaches, etc. Before the market begins to be glutted, we promise to raise the alarm.

Cactus Speciosissimus.

The above cut, though correct in outline, gives but a poor representation of this most gorgeous of all this most beautiful tribe. The expanded flowers of well grown specimens are from 7 to 8 inches in diameter, and of the most brilliant blending of scarlet, crimson, and violet shades. We have frequently seen plants of six feet in hight, and three feet across, with 30 expanded flowers at a time, and thus seen, it equals in beauty any production of the floral kingdom.

Another interesting species of the genus is *Cactus grandiflorus*, or more correctly, *Cereus grandiflorus*, having flowers considerably larger than the above, of a whitish yellow, which are expanded only at night—generally in perfection at midnight—emitting a most delightful fragrance. This variety is not quite so free to bloom as *speciosissimus*, and this, coupled with its rare habit of expanding its bloom only at night, makes it, when in bloom, an object of more than common interest. These species of *Cactus*, though natives of the tropics, are of easy culture. Pieces of the stems take root readily in the open ground during the summer months, in any place where the soil is loose and sandy, and never for any length of time saturated with water. When rooted, they may be potted in sandy loam well enriched with rotted manure, and removed to the plant room or green-house, where they should never be exposed to a temperature of less than 40°, nor much above 80°. The temperature of what is termed a "warm" green-house, is best suited to develop their growth and bloom. It is a common belief that the cactus requires little or no water: this is a mistake, though they will exist for months without water, yet in this state they do not grow. If it be desired to keep them growing, in a temperature say of 60°, they will require water *when dry*, the same as any other plant. In a low temperature, with a damp atmosphere, watering must never be given, as in that condition they will never become dry.

Jottings in the Flower Garden.

Not made this Winter with mittens on, but in Summer and Autumn, and now transcribed at leisure for the readers of the *Agriculturist*.

July 10th....These Japan lilies are not doing as well this year, as formerly. An old florist tells me that they need a peculiar soil, and a change of soil once in three or four years. They grow best in a mixture of sand, wood's earth, a little old manure, and common soil. They *are* well worth all the care they require.

July 15th....This patriotic assortment of verbenas works pretty well. In former years, I had set out my plants without much regard to arrangement of colors, aiming only to get the finest flowers in the market. But this year, I determined to try something new; and the "Red, White and Blue" being the national war-song, I thought I would inscribe it on my verbena bed. So here in front, is a curved line of red, one of white next behind, and one of blue beyond. Aside from the patriotism of the thing, the colors are such as always sort well in a bouquet. Don't tell me that this floral flag will not help decide the fate of the nation!

Aug. 20th....Hail to the new Gladioli! What an improvement on the old sorts! The long honored *floribundus*, and *gandavensis*, and *byzantium* were well enough in their way, and are not to be cast aside now, but these new French hybrids eclipse them. Let's see; it was M. Souchet, of Paris, who orighated most of these novelties. Great praise to you, sir!

Here, mark down the names of a few of the best in our border. They are, Brenchlyensis, Galathee, Madame Henrieq, Osiris, Joan of Arc, Egeric, Adonis, Hebe and others. Some of these, like Joan of Arc, are very tall and need stout rods four feet long to support them; otherwise they will be blown over and broken. It is one excellence of these plants that they require so little care. Any good garden soil will answer; and they need no watering or muleling or guarding from insects. Set out the bulbs a foot apart, about the 10th of May, drive in stakes by the side of each, and tie up the stalk as it grows, with cords. In the Fall, before the ground freezes, cut off the stalks near the ground, dig up the bulbs, and keep them in a dry root cellar, free from frost.

Sept. 3d....Take off your hat to this bed of plants whose leaves are their flowers, as Patrick says. Don't know their names? Well let us read the labels on them. Here is *Parfaitum grande*, with broad, leathery leaves of a green ground mottled with yellow spots. An odd thing. The next is a new variety of *Amaranthus tricolor*, and so is that. The first, with dark, purplish crimson leaves, dashed with blotches of bright vermilion, is very striking, when the sun falls upon it. And that, with pale green leaves, strongly marked with dark crimson and yellow at the base, is quite curious and showy. Next to these, are plants of the "Dusty Miller Geranium," whose silvery leaves are in striking contrast with the foliage around, and especially with that of *Perilla Nankinensis* beyond. As a fringe to the whole bed, here is a row of silver edged geraniums.

This border has, on the whole, proved the most noticeable corner of our flower garden, this Summer. The vivid contrasts of color and form of foliage, and the fact that the colors are part and parcel of the leaves, not of the flowers, is what arrests the attention of man, woman and child. Usually the leaves of a plant have to play second fiddle, but here the blossoms have to do that, and the *leaves* make all the show and have all the glory. We fancy that the Petunias and Lilies yonder are jealous of this much admired bed, and would fain pull themselves out at the root, in their passion to get across the walk and thrash these showy leaves!

Sept. 10th....These double Zinnias have not turned out to be so grand an affair as was predicted. In the first place, full two thirds of the costly seed is spurious, and then the double flowers are less brilliant than the old, single sorts. Still, they are valuable for a variety.

Near this bed, is a root or two of the Sensitive Plant. Will children and young ladies ever tire of noticing this curious plant, and touching its acacia-like leaves, to see them shrink, close up, and droop to the earth! It would take away much of the poetry of the thing, if I should tell them that the plant is just as sensitive to the touch of a stick as to that of the human hand; so I won't tell them. But even with the poetry taken out, it is a curiosity in vegetable life. *

Much from Little—A Mechanic's Homestead.

Within a mile from where we now write, there lives a poor man, who has accomplished so much in his little garden, that we must speak of it as an example to others. About ten years ago, when he came into possession of his acre and a quarter lot, a small house and barn stood upon it; there were three old apple trees in one corner, and hard by were two scraggy knot-covered plum-trees: on each side of the front door were two Balsam firs. A part of the ground was devoted by the former owner to potatoes and a few other vegetables. Such were the "investments" on this place.

The new occupant on taking possession early in the Spring, began with the apple-trees, which bore nothing but worthless "natural" fruit. He grafted a part of each tree with R. I. Greenings, Baldwins and Spitzenbergs, and at the same time scraped the trunks and limbs clean of vermin nests, and gave them a good caustic washing. The half-dead plum-trees were cut up by the roots and burned, and their place made good by several nice dwarf-pear trees. The Balsam firs were not disturbed, but a few other handsome shade trees were set out in front of the house to keep them company. The whole of the ground, except a narrow grass plot around the house, was put under the plow, then dragged and worked smooth for planting. Potatoes and corn were, of course, the main crops, but not the only ones. Beets, onions, carrots, cabbages, turnips, cucumbers, squashes, pumpkins, beans, peas, and all the rest had their allotted place. Most of these articles were grown in drills, Mr. Johnson believing this saved time, labor, and space.

Our friend is quite systematic. On the south and west sides of his garden, where the ground was somewhat shaded by fences, he set his raspberries and currants, believing that they would thrive better there than in a very sunny exposure. But he did not fall into the mistake of allowing weeds to creep in from a neighbor's land. The raspberry plants were annually manured and kept under as clean cultivation as any other part of the garden. On the north side, protected from the cold by a high fence, he set his grapes. He set others, too, on the sunny side of his shed and barn, occupying every available spot with a choice variety. At first he planted only the Isabella, Clinton, and Catawba; but of late, he has added the Diana, Rebecca, Concord and Delaware.

Dwarf pears have succeeded well in his hands. Having two or three cross-walks, with borders on each side, he set out pears in these borders eight feet apart. He planted only those sorts which had proved generally hardy and productive; and rigidly confining himself to these, he has met with few failures. He used no manure at the time of planting—for he was too poor to buy it—but he has enriched the surface around them every year since.

And this suggests another thing. His land has been brought up from comparative barrenness to high fertility, without purchasing a single load of manure. The droppings of the cow have been carefully saved and mixed with absorbents. The pig-pen and hen-roost have been little mines of wealth. Weeds and other refuse have been thrown in for the grunters to work over into compost. In one corner of the little barn-yard, a saucer-shaped place was dug out water-tight and capacious. Here, muck, sods, saw-dust, chip-dirt, leaves, and old straw were thrown from time to time, to absorb the kitchen and chamber slops. Nothing was allowed to waste on the premises, that could be turned into manure. Thus at the end of every year a fine pile of rich compost was provided, ample for all the wants of the place.

Mr. Johnson is a mechanic, and has been obliged to take care of his place entirely out of the regular business hours. He hires no help, but is aided by the nimble fingers of two sons to do much of the light work. As already intimated, ten years have wrought a great change in his place. The apple-trees furnish him all the fruit he needs in Winter. He has pears, grapes, and berries, not only enough for his own use, but some for market. Within the last two years, his daughters have prevailed upon him to lay out a little wider space around the house to grass, and this they keep neatly cut and swept. They have also got a few flower beds, and trellises for vines; so that now, this is one of the most attractive cottages in the neighborhood.

A Hint in Grape Culture.

We noticed last September, in the grounds of a friend who is largely interested in grape-growing, that his Isabellas standing on level ground had not begun to color, while on one vine standing on a bank or terrace, the berries were ripening up finely. What means this? we asked our friend. He could only explain it by saying that originally this vine was as low as the others, and then matured its crop no earlier. But within the past two years, the ground had been graded and cut away near it, leaving this vine high and dry above the others, and since then it had become an earlier grape.

This afforded a good illustration of what we have often enjoined, viz.: the importance of drainage for grape growing, and we put it on record here for the benefit of others. Now, every man can not plant his vines on banks or terraces, but he can see to it that the subsoil of his vineyard has no standing water in it. In choosing a place for planting a grape, or a lot of grapes, by all means select a dry spot with a sunny, open aspect. And if there is any doubt about the dryness of the subsoil or if a wet soil must be used, give it a thorough draining. Free circulation of air, if the vine be sheltered, greatly promotes the ripening of early fruit.

Propagating Plants from Cuttings—Valuable Suggestions.

[This subject is daily becoming of more importance to all classes. A large number of plants are best propagated from slips or cuttings, while many improved varieties can only thus be propagated in purity. Every person who grows a tree or shrub, should understand, if he do not practice propagation.—At a recent conversational meeting of the Brooklyn Horticultural Society this subject was discussed at length. The remarks of Mr. A. S. FULLER were so valuable, and of such general application, that we requested a transcript of them for the *Agriculturist*. Mr. Fuller held, that to enlighten the general public on the processes of good nurserymen, as well as the "tricks" of dishonest ones, would, in the end, benefit reliable dealers, by preparing purchasers to appreciate well grown plants. We omit, for want of room, the first portion of the remarks.—ED.]

In propagating plants from cuttings we should bear in mind that there are other desirable objects besides the one of increasing the number. One of the most important is, to increase the vigor of the plant so that it shall produce better fruit or flowers, if possible, than its parent. This can only be done by a proper selection of the cutting, and a continued watchfulness from the start, never allowing the plant to become stunted at any period of its growth. One of the conditions of success is a proper selection and preparation of the soil; one of a sandy nature, moderately rich, is, perhaps, the best adapted for almost every description of cuttings. Where the soil is tenacious, sand should be applied in quantities sufficient to make it porous enough to allow the water to pass through it readily. And further, the soil should be pulverized at least eighteen inches deep;—not that a great variety of plants will not grow from cuttings without doing this, but they will succeed better if the soil is thoroughly and deeply manipulated.

Instead of mulching the cutting during the Summer for the purpose of keeping the soil moist, as sometimes recommended, we prefer stirring the surface of the soil with hoe or rake, at least once a week, or oftener if possible. This allows the air to penetrate the soil, carrying with it the moisture which is always present. From the many experiments which we have tried, we have uniformly met with better success when this plan was followed than when any kind of mulching was used.

The best time to make cuttings is in the Fall as soon as the wood is ripened. At this time a portion of the sap is in a semi-liquid state, and is descending, solidifying as it passes along, and depositing the last layer of woody fiber of the season. When a cutting, is properly treated, this woody fiber or alburnum slowly grows from the end of the cutting, and forms the callus, which in its turn changes to roots. If the cuttings are not taken off until they have been exposed to severe cold, all the alburnum has become hardened fiber, and then it becomes necessary for us to place the cuttings in a position where warmth and moisture will again partially liquify this before a callosity will form. As it takes more or less time, according to circumstances, for it to change a portion of its structure so as to form roots, it is better to give it plenty of time than force it, as we sometimes do.

There is another advantage in making cuttings in the Fall, which is, that we can have them rooted by the time vegetation starts in the Spring. It is a well known fact that roots will form at a much lower degree of temperature than leaves, therefore if cuttings are placed in the ground in the Fall, and its temperature kept a little above the freezing point, roots will be produced while the leaves will remain dormant. When the rise of the temperature commences in the Spring, these cuttings throw out roots (if they have not already done so) more readily than if but recently made; for the change has been gradually going on in transforming branches to roots, although to the eye it may not be apparent. Again, plants that are exposed to severe cold, lose much of their vitality, and, as before stated, the alburnum from which the roots spring becomes so hard that it emits roots very slowly, if at all; and sometimes we are compelled to put the cuttings for a time in water, as is often done with grape cuttings. This softens the alburnum again, which is necessary to form roots.

Sometimes it is not convenient to plant cuttings in the Fall, as the soil may not be prepared; in that case they may be tied up in small bundles and buried in the earth—either in the cellar or in some dry place in the garden. But it is better, as a general thing, to plant them in the Fall, and then cover sufficiently to keep out the frost, as with some varieties, like the quince, which emits roots from every portion of the bark, it is much better to place them where the soil can come in contact with every portion of the surface, thereby softening the outer bark and allowing the roots to protrude. With those varieties of plants which emit roots mostly from the severed part—or at the buds, it will make little difference whether the whole surface comes in contact with the soil during Winter, or only the lower ends; the latter will be the ease, if carefully buried in bundles.

The first cuttings made in the Fall are generally from the currant, as it ripens its wood, in this latitude, by the middle of September; and as soon as ripe, the cuttings should be made. Take good, strong wood of the present season, and make the cuttings about six inches long, cutting them off smooth just at the base of a bud, square across. If you wish to prevent them from throwing up sprouts from under ground, cut out every eye or bud, excepting two or three at the upper end. Now draw a line across the bed which is to receive the cuttings, place the back of the spade to the line, press it into the soil nearly perpendicularly to the depth of six inches, and throw out the soil, making a trench in the shape of the letter V. Set the cuttings two inches apart along in this trench, with the upper end even with the surface, as the soil will settle enough during the Winter to expose the upper buds; put in a little soil, say enough to cover the base of the cutting one inch; then with the handle of the spade or a piece of plank press the soil firmly down to the base of the cuttings. The object of this is to exclude the air from the recently severed part and furnish it with a supply of moisture. Not that the cutting takes up any considerable quantity of water, yet it is necessary that this portion of the cutting should not become dry, for then a vacuum occurs, which will be filled with water and cause it to decay. Currant cuttings planted early often become rooted by the time Winter sets in, without making any leaves; and they will make twice as much growth the next season as they will if their planting is deferred until Spring.

Cuttings can be made of most kinds of shrubberry as soon as the wood is ripened and the leaves can be taken off without injury to the buds adjacent, and planted in the same manner as described for currants. Gooseberries may also be treated in the same way.

All the varieties of syringa, althea, Wiegelia, deutzia, viburnum or snowball, Forsythia, honeysuckle, spiræa, climbing, Bourbon, and hybrid perpetual roses grow readily, if cut before frozen.

In growing quinces from cuttings, one, two or three year old wood may be used; and we have found it extremely advantageous to pack the soil very firmly about the base of the cuttings, leaving it loose below the cutting and at the surface. Having grown many hundred thousands, we have always found our success (other things being equal) just in proportion to the care taken in making the soil firm about the base of the cuttings. Merely sticking them down, as is sometimes done, depending upon the rain to settle the soil, generally proves a total failure.

The method ordinarily pursued in making grape-cuttings, is to cut them into lengths of from one to two feet; but we think the short cuttings are preferable. We make them about six inches long, or with only two buds. But sometimes the buds are further apart, and in that case we have to make the cutting long enough to include the two buds if no more. If the buds are so near together that two will not give us a cutting four to six inches long, then make them with more than two. The cuttings should be made as soon as the wood is ripe, and either planted immediately or "heeled in" in some dry place in the garden or cellar. They should be planted at least six inches apart in the row, and the rows one to two feet apart. Set them perpendicular, leaving the upper bud even with, or a little below the surface; press the soil firmly about them, and attend to hoeing and keeping the soil loose between the rows during the Summer. Some varieties grow more readily from cuttings than others, but we have tried none of which a greater part will not grow if they receive proper attention.

There are some kinds of hardy plants and trees—like the Paulownia among trees, and the double flowering almond shrubs, and the raspberry and blackberry among small fruits—that do not grow from cuttings of the ripe wood, yet can be multiplied with great rapidity from pieces of the *roots* planted in any good rich garden soil.

Among the many theories advanced to explain why these variations occur, none are entirely satisfactory. Much practice becomes experience, and this is our only guide to success.

Wire Worms.

These pests, terribly severe on some land, and quite unknown on others, baffle the efforts of the most ingenious to work their destruction. They abound in light, moist land, in which inert vegetable matter is found, and attack, as most of us know by experience, roots of grass, grain, turnips, potatoes, etc., in all ages and conditions. The worm is the pupa of a small beetle, and lives, it is said, for *five years*, ever committing its depredations before it arrives at maturity, and assumes the form of the perfect insect. A writer in the "Scottish Farmer" makes the following interesting statement: "The late Mr. Pusey found that rape-cake had the effect of destroying large numbers of wire worms. He caused it to be broken into pieces of the size of beans, and to be sown over the land. The insects eat their way into the pieces of rape-cake, and whether from dying the death of gluttons, or being destroyed by its other qualities, he found numbers of dead wire worms imbedded in it." Rape-cake is an excellent manure, and may be applied at the rate of 5 to 7 cwt. per acre. This writer also recommends Peruvian guano applied in the Spring, alone or mixed with rape-cake, as a preventive, and esteems it of especial virtue, sowed with the seed of turnips and similar crops. The experiment may well be made to see if cotton-seed oil-cake will not answer the same purpose as rape-cake, which is difficult to obtain in this country.

Chamberlains's Mode of Growing Fruits and Plants in Baskets of Moss.

Considerable attention is being attracted to the experiments of Mr. Chamberlain, who proposes to grow not only ornamental plants, but even fruitful vines and trees, in baskets filled with moss and a small quantity of artificial soil. The engraving above is an exact representation of a basket of growing grapes recently presented to the lady of the Presidential Mansion, at Washington. The basket is about 30 inches across at the top. At a meeting of the Brooklyn Horticultural Society there was shown a peach tree in a 9-inch basket where it produced ten beautiful peaches; a grape vine with a dozen well formed clusters of good flavored fruit; strawberries in full bearing, as luxuriant as if in the open air; ripe pineapples, etc. At Mr. Miller's, 29 Broadway, may now be seen a variety of ornamental plants, with pineapples, strawberries, etc., all growing in baskets.—The main features of the process are: a plentiful supply of moss around and above the roots to retain moisture, and a comparatively small quantity of artificially prepared soil—consisting mainly, we believe, of powdered charcoal and ground bones. A patent has been taken out for portions of the process, which will somewhat interfere with its general introduction, though we presume Mr. C. will find it to his own interest to facilitate a wide adoption of this pleasing, if not practically useful mode of growing dwarf fruit trees, vines, and all kinds of ornamental plants.

A Sixty Dollar Green-House.

The articles on "Green-Houses for the People," published in last volume, have awakened a good deal of interest among many who have a taste for these structures, but who have hitherto supposed that the most limited greenhouse would cost $500 to $1000. We have many letters asking the lowest cost of the cheapest building that can be got up to answer the purpose. Well, just to demonstrate that green-houses are within the reach of a large class, we are now putting one up, which will be, in outside dimensions: 32 feet long, 12 feet wide, 9 feet high on one side, and 4 feet on the other, covered with 12 sashes, each 3½ by 6 feet. The work is mainly done at odd spells by two men, for whom we have little else to do at this season, so that their time is not reckoned. The outside expenses for materials, etc., we estimate at only about *sixty* dollars! We intended to give a full description and account of expenses, next month, but that will be too late for many inquirers, who wish to get up something similar, during this leisure month of January. So here is a brief description. (Fig. 1 is a skeleton, to show the construction of the parts—the posts, portions of the plates, rafters, siding, etc.)

First, a lot of refuse oak and chestnut logs were cut up into various lengths, and split into quarters. They were hewn somewhat straight on two sides, one side being made pretty true. These are set up in the ground firmly, like fence-posts. Seven on the rear or north side rise 9 feet above the ground, and seven others on the front or south side rise nearly 4 feet. The two posts on each end are of a hight to line with corner posts. These rough posts, set with the straight sides out, are furred out on the inner sides, by nailing on perpendicular strips, so as to make the thickness of the posts uniform, (about 10 inches), and also to give straight edges for boards. Matched boards are then nailed upon the outside and inside of the posts, except at *d*, which is left for a door. The boards are hemlock, 1 inch thick, 9 inches wide, 13 feet long, matched, and planed on one side. Thus planed and matched they cost 16 cents. each, delivered. The space between the outer and inner covering boards is filled with fine shavings, packed down. Charcoal, or saw-dust, or straw would answer, but we have chosen the shavings, because they cost next to nothing at the planing mill or joiner's shop. (Fig. 2 is a section of one side, showing two posts, with the manner of putting on the boards, and filling in the shavings, *before* putting on the plates.)

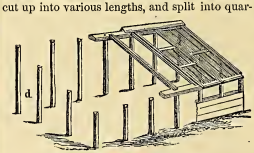


Fig. 1—SKELETON GREEN-HOUSE.

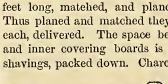


Fig. 2—SECTION OF WALL.

The tops of all the posts are sawed off true, and two plates laid upon the front and rear rows, and spiked down. Seven rafters are next laid on. These are 12½ feet long, and are cut in the form shown in the last September *Agriculturist*, fig. 3, page 273. This leaves places for six long sashes. We have each of the 12-feet sashes made in two parts, 6 feet long, and 3½ feet wide, the upper one to lap upon the lower one. The sashes are to be well made, and the whole (12) are contracted for at $33, including the glass well put in. The upper tier will be movable, and be held in place by cords, pulleys, and weights. A door hung at *d*, will complete the structure. The sashes are like Fig. 3, Sept. *Agriculturist*. These, and the boards and nails, are the chief outlay. As near as we can figure now, the cost of boards, plates, rafters, nails, and a coat of paint on the outside, will be about $25 to $27, making, with the $33 for 12 sashes, a total of about $60. (The items are: 90 boards, 16c. each = $14.40; 2 plates, 32 feet long, 3x10 inches, $1.37; 7 rafters, 3x4 inches, $1; door $1.75; hinges, latch, etc., $1; nails and spikes, $1; cord and pulleys, $1; painting, $3.50; sundries, $1 to $2.) Of course, if the labor was all hired, or we had other profitable work for our men, the cost would be somewhat greater. Many men, mechanics at least, can do all the work themselves. In the green-house here described, we shall, for heating only, use a common stove, and drain pipes, as described in November last, page 340. We hope these hints, taken in connection with what has been said in the last four numbers of the *Agriculturist*, will enable many of our readers to build themselves cheap green-houses, where more costly ones can not be afforded. We should have added, that the sashes we are providing, are just of suitable size and form to use on common cold frames and hot-beds, or on a small span-roof green-house, and they can thus be used for either purpose, when not needed for this green-house. Our cheap green-house can be examined by any one after the middle of January, when it will be finished and put to use. The inside measure will be 10 by 20 feet, giving an area or ground space of 200 square feet, and affording room for starting and growing many plants.

The Cheapest Fruit Gatherer Yet.

Recently a subscriber, N. G. Carnes, Riverdale, N. Y., brought to the office of the *Agriculturist* the cheapest fruit gatherer we have yet seen.

It is simply a narrow sheet of strong tin, bent to a circle, and the ends tacked to the end of a pole. The upper edge is cut with notches to pick the fruit, and a bag large enough to hold half a dozen or more fair-sized apples, is attached to the lower edge. The engraving represents the handle inserted in a tin tube which is soldered to the side of the apparatus, but this is not necessary. Any one can fit up this arrangement with a piece of old tin leader, a small strip of muslin, and a pole, at an expense of not over six cents, and it will be as effective as many implements of the sort costing ten or twenty times the amount. At least we judge so from the handling of the apparatus. The teeth or scolloped edges should be rounded, and filed smooth, to prevent their cutting the apples, pears, and peaches in careless handling.

THE HOUSEHOLD.

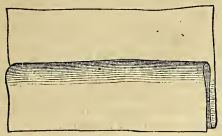


Fig. 1.

Impromptu Handkerchief Night-Cap.

Night-caps should be worn when sleeping in a draft of air, but not otherwise. A very good and effective head covering may be made in *half a minute* by any person obliged to sit or sleep in a draft of air in a room, or while traveling in cars, or elsewhere, if he have a fair size pocket handkerchief, or piece of cloth. *First*—Spread it flat and fold as shown in fig. 1; that is,

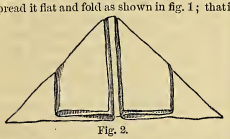


Fig. 2.

bring two edges together and then turn one edge back even with the fold. *Second*—Seize the folded part in the two hands, and turn the handkerchief directly over from you. Then bring the two upper corners over towards you as seen in fig. 2.

Fig. 3.

Third—Commencing at the side next to you, roll up the edge, as in fig. 3, so as to bring in and fasten the two ends of the fold. *Fourth*—Raise the hands up, and a bagging portion will drop down, which is to be placed over the forehead. Bring the rolled part back over the head and around the neck, tying under the chin, as seen in fig. 4.—Our artist seems to have caught sight of one of the "Zouave" soldiers in the Park Barracks, while making the sketch. Or more probably he wished especially to attract the attention of soldiers, for they of all others will find this a most convenient arrangement.—N. B. The *Agriculturist* claims no patent on this night-cap—it is free to all the world, and to the "rest of mankind."

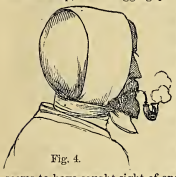


Fig. 4.

Knitting Mittens with one Finger.

The direction for knitting socks published in the December *Agriculturist* are proving of great interest and value. We already hear of knitting circles started in various parts of the country, originated wholly from seeing our article and illustration. One subscriber informs us that he saw over thirty ladies at work knitting socks the other evening, with the *Agriculturist* before them as a guide. We are glad to hear thus much, and therefore take the more pleasure in now presenting directions for knitting MITTENS. Gloves, though convenient for working and driving, are very cold, as the fingers, when kept isolated, do not help keep each other warm. Still it is quite essential to have the free use of one finger in almost all kinds of work; and this is indispensable for soldiers in handling and using their fire-arms, during cold weather.

DIRECTIONS.—We present herewith (fig. 1) an engraving just **half the size** for an ordinary mitten. **Yarn.**—For Army Mittens, grey or blue mixed yarn, No. 20, or coarser, is recommended, though any color but white will do. They may be knitted or crotcheted. **Knitting Needles.** No. 15 are about the right size.—**Weight,** 3 ounces at least.—**Length,** 11 to 11½ inches.—**Width** over palm of hand 4½ to 4½ inches.—**Wrist,** or **Cuff.** Put 22 stitches on each needle, of No. 20 yarn, or more or less if the yarn be finer or coarser than No. 20. Rib 2 to 2½ inches for length of wrist or cuff.—**Thumb.** Begin the thumb at *A*, by making 2 stitches for seams, and widen 2 between seams, every four times round, until you have 20.—At *B*, drop 20 *thumb* stitches, and cast on 8 *new* stitches to increase width of hand.—**To Finish Thumb,** take up the 20 stitches dropped at *B*, and add 8 new stitches.—**Finger.** At *C*, drop 16 stitches for finger, and cast on 8 new stitches.—**To Finish Finger,** take up the 16 stitches dropped at C, and add 8 new stitches.—**To Finish Hand,** begin to narrow at D, but keep the width well up to the end.—The exact directions for finishing off the thumb, finger, and hand, we can not give. Our engraved pattern will be a sufficient guide, remembering that it is *just half of the average size.*

Any person desiring a pattern of full size can receive one free of charge by addressing John J. Hinchman & Co., at 26 Vesey-st., N. Y. City, to whom we are indebted for the directions.

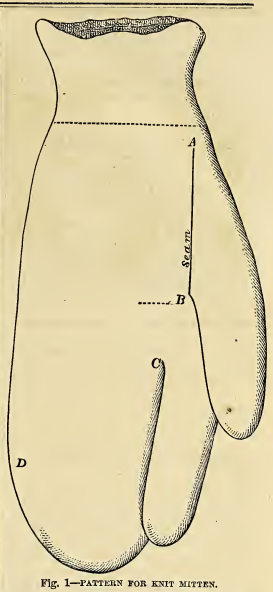


Fig. 1—PATTERN FOR KNIT MITTEN.

Cloth Mittens with one Finger.

These are very easily and cheaply made, and answer an excellent purpose. With a hand needle a woman can make up a dozen pairs or more in a day, and with the aid of a sewing machine the number may be more than quadrupled. The cost of making is so little that it pays to use up even old cloth—the skirts and back of a coat, the wider portions of pantaloons etc. We have from the Office of the Willcox & Gibbs' Sewing Machine Co., a full-size pattern, which we have *reduced exactly one-fourth.* Only two pieces of cloth are required, though the cloth, if too small, may be pieced out before cutting. Cut the larger piece like Fig. 2. When folded over from the dotted line, *a* matches *a*, and *f* upon *f* forms the cot for the forefinger.

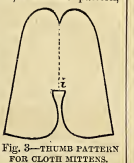


Fig. 3—THUMB PATTERN FOR CLOTH MITTENS.

The semicircular piece, *t*, is cut so far as marked, and then turned up against the inside of the thumb, giving a double thickness just where most used. Fig. 3, is a pattern for the thumb.

DIRECTIONS.—First sew the round piece (*t*) on to the outside of thumb (at *t*); then close up the thumb on the back, and fit it to its place (in *t*,) where it must be firmly stitched. Next close the side and finger by stitching around. The directions before us advise to leave the edges of cloth *outside* as they shield the sewing, while this secures a better fit. It will not look so neatly, though the appearance is not of much account. The folding is to be one way for the right-hand, and the other way for the left-hand mitten. A little practice with paper, and then with any cheap cloth, or common brown muslin, will enable any one to get a very neat pattern

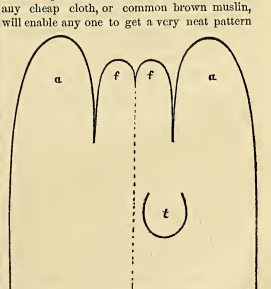


Fig. 2—PATTERN FOR CLOTH MITTEN.

in an hour or two. Half a million pairs would doubtless be welcomed by the soldiers who are handling cold weapons in this chilly weather. If our girls will get up plenty of these mittens for their fathers and brothers, so that they can have

a change every time their mittens get wet with snow and cold rains, they will confer a great favor. They may, if they please, stitch together as many kinds and colors of cloth in a pair of mittens, as there were in Joseph's coat. Willcox & Gibbs, N. Y. City, will supply full-size patterns free.

More About the Sock Pattern.

"Ready Knitter" writes, that the pattern and directions for knitting socks, given in the Dec. *Agriculturist*, are entirely orthodox, so far as they go, as was proved by several sets of nimble fingers she saw at work upon the socks after the appearance of the paper. They understood all the directions, and followed them until they got through with: "Knit as many times across as there are stitches on, then narrow five times." But what then? Surely, not bind it off; it would take a veteran square heel to fill out such a sock. "Ready Knitter" completes the directions thus: "For the heel, knit as many times across, as there are stitches on; narrow gradually, two stitches on every needle, (not the seam needle,) until the number is reduced one-half; then bind, and you will have a round, well-shaped heel."

For the American Agriculturist.

Washing Quilts and Comforters.

"Don't look at this quilt, I beg of you," said an invalid lady the other day, as my eyes involuntarily wandered over a once handsome patchwork quilt, spotted here and there in an unaccountable way. "You see," she continued, "it was nearly night before we wet it on the last washing day, and the girl rubbed some soap on the dirty spots, and put it in the suds, and then forgot it until morning."

Now, if there is anything needed to drive a woman crazy, it is to see a pretty quilt, that she has worked at for days and months, and prided herself on, spoiled in the wash.

Every good housekeeper has her bed clothes washed in the morning, so that they may have the benefit of the whole day to dry, and then there is no danger of their being forgotten over night. Handsome calico quilts are generally supposed to have deep red, green, or orange colors in them, that contrast so well with the white; if they lie wet over night, or are left out in frosty weather to dry, ten to one, they will never look well again; but if hurried through of a fine morning, and dried before night, they will look almost as fresh and new as they were when first made. A friend has a pretty quilt that was taken for a new one not long since, but she said: "The quilt is thirty-three years old, and was pieced by my mother before she was married; it has been washed a score of times, but I have never used it much because the hands that pieced it have long since rested from their labors."

And to young housekeepers let me say, always *try* your calico by thorough washing before putting it in a quilt, and, except for a comforter or common quilt, never use calico that will not stand boiling.

I believe in pretty quilts, and think they are an important feature in the beauty of the house, just as much as wall paper, painting, or pictures. For a spare bed-room, or "stranger's room," I remember a mother that always used a white Marseilles for the top quilt, and it was the most simple and elegant. In common bed-rooms, a calico quilt looks clean longer, is less expensive, and answers the purpose equally well.

And now a word as to comforters. I think they are the most expensive bedding people use, though they come the cheapest. What housekeeper does not look back this snowy day to her Fall washing of bed clothes, and think of the sigh of relief she heaved when through with it; and the *comforters*, she dreaded them more than all the quilts and blankets together. There are fine lamb's wool blankets in my house to-day that have been in wear half as long as I have myself; they have worn out several sets of comforters, and have been far more *comfortable* and certainly cheaper and cleaner. It is impossible for a woman to get a comforter right clean, except by ripping it out, washing the batting, and making it over; and this is one hard day's work for the best hired girl she ever had.

The fact is, we dread the washing of our comforters so much, that where we wash our blankets and quilts twice, we only wash the comforters once, though they need washing the most, from the fact that they hold, in their thick folds, more of the perspiration and impurities that escape from our bodies during sleep.

Carroll Co., Ill. MRS. M. J. STEPHENSON.

Double Glazing vs. Double Windows.

As usually constructed, double windows interfere with ventilation of living rooms, for seldom indeed is there other provision for a supply of fresh air. Now instead of using double sashes, if we simply put in double pieces of glass (one on the outside and one on the inside of the same sash) we may raise the sashes as usual. Two thicknesses of glass with the quarter inch space of air between them will keep out a great deal of cold and save fuel. At the same time the rooms will be likely to become warm while the air is still pure, and the result will be, that in order to cool them a sash will be lowered, and thus a supply of pure air maintained. When a single thickness of glass is all that defends us against the temperature of zero, which prevails without, the air of the room is so rapidly cooled that admission of fresh air is prevented by all possible means. The windows are "calked," the doors are "listed," and every thing made as close as possible. By having the windows double glazed, the obstruction of the view by the accumulation of frost is nearly if not entirely prevented.

A Cellar.

Whoever is at housekeeping, even in the most humble way, will appreciate a good cellar. There are multitudes, nominally keeping house, who really have nothing to do with housekeeping; these are they who build fine houses, and follow and set the fashions in such things. We need cellars to preserve things which must be kept at a uniform and rather low temperature, and which are benefited, or at least not injured, by moist air. The cellar should always be cool, moist, dry, rat-proof, well ventilated, and light or dark at pleasure. To secure these qualities it should be below the surface of the ground, with cemented walls and floor; if in wet ground, the water should be cut off by drains in the foundations, and the floor should have slope enough to carry off into side drains water spilt upon or used for washing it.

Cellars are often dry in Winter and moist in Summer, because, as the season changes, they are either warmer or cooler than the outer air, and so part with or attract moisture. On this account, ventilate cellars on moist, warm days in Winter. The introduction of hot-air furnaces into cellars to warm the rest of the house, has the effect direfully to warm and dry the cellars, and entirely ruin them for keeping vegetables, fruits, cider, etc.; and the modern fashion of basement rooms and cellar kitchens which is prevailing to some extent even for country houses, is equally ruinous. If a cellar kitchen is desirable, dig a cellar beneath it.

WHAT MAY BE KEPT IN A GOOD CELLAR.

1st. *Fruits*—particularly apples.

2nd. *Roots*—potatoes, turnips, carrots, parsneps, beets, salsafy, etc., the most sensitive of which, if packed in earth, will scarcely grow at all until near Spring, and will not shrivel a particle.

3d. *Growing Plants.*—Cabbages, cauliflowers, and broccoli, which will gradually head and come to perfection during the early part of Winter; celery, which grows and bleaches as it never does out of doors; endives, which, taken in and planted in beds, grow without care, beautifully blanched, and form a most delicious winter salad; and to these may be added leeks, chives, parsley, and many other plants.

4th. Cider, wines, bottled fruits, etc.

5th. Many tender plants, which will not bear our winters, as for instance, all tender roses, pelargoniums and geraniums, oleanders, lemon-scented verbenas, jessamines, *Daphne odorata*, etc. All these, and yet we have hardly begun to tell the uses of a cellar, never wet, never dry, never warm, never cold, never airy, never close, and dark or light at pleasure. We regard such a cellar as indispensable to economical housekeeping, but as a *luxury* is it not worth enjoying?

For the American Agriculturist.

Rat Proof and Water Tight Cellars.

In the foundation of the cellar wall, it is often and wisely recommended to lay a course of flat stones below the surface of the cellar floor, projecting four or five inches beyond the rest. If rats dig under the foundation from the outside, to come up on the inside, they will strike their noses against this projecting ledge, and supposing the whole floor to be made of quarry stones, they will back down and give up. This will answer in most cases; but to make sure work of it, and besides to get a dry and smooth cellar floor, it is advisable to cover the whole cellar bottom with water lime cement.

And this is the way to do it. If the house is already built, and the cellar is rather low between joints, it will be best to excavate and deepen the whole surface three or four inches. Having made a new smooth surface, sloping a little towards one corner, for the benefit of drainage, bring in a load or two of small cobble-stones, say of goose-egg size, and spread them evenly over the ground. Then put on a layer of coarse gravel and rake it down smooth, preserving, carefully, the slight descent to one corner, where there is to be kept an open outlet into the cellar drain.

Now prepare the cement, a little at a time, using the best of materials, and mixing two parts of hydraulic lime with three parts of clean sand. Spread it on about two inches thick, as soon as mixed, leaving the work finished smooth as you proceed. At the sides of the cellar, plaster up the walls eighteen inches from the floor. Make a shallow gutter in the cement all around next to the walls, to carry off any water that may chance to get on the floor. This gut-

ter is to terminate in the lowest corner of the cellar. At that point, a round hole (say two inches in diameter,) is to be made through the cement, and leading into the cellar drain. This hole is to be kept plugged tight (rat and mouse proof,) except when it may be needful to draw it for letting off surface water. Or better, it may be protected with a wire screen, or close iron grating to shut out the entrance of vermin.

In a month or six weeks, this plaster will be hard enough to bear walking upon; but at first, it is best to lay down a few boards. In two or three months the floor will be as hard as a rock. It can then be swept and scrubbed as often as one may desire. Rats and mice can not dig through it. Water from beneath will not penetrate it. It will be a daily and perpetual help to good housekeeping. X.

REMARKS.—(1) It strikes us that it is nonsensical to suppose rats will calculate the thickness of the wall, and give up in disappointment if it prove to be six inches wider at the bottom than above. (2) A smooth solid cement floor as recommended, is excellent every way, and contributes to neatness, purity of air, and the good keeping of vegetables. Wherever hydraulic lime is accessible, it is advisable to use it. The layer of cobble stones adds to the solidity and firmness of the bottom, but it adds to the expense also, and is not indispensable. We have seen many good cellar floors made by simply plastering with hydraulic cement directly upon the ground. (3) We have found by experience that a coat of cement, however good and thick upon the walls, will not keep water from breaking through, if the ground around be wet and springy. A drain outside the walls is the only help under such circumstances. The best protection against rats is to bed the bottom course of stone in cement, and have some of the cement below and behind the lowest tier of stones. A grouting or thin mixture of hydraulic lime, poured in among the loose earth behind the wall, will render it rat-proof.—ED.]

Moist air in Dwellings.

Who does not enjoy the summer-like air of a green-house, or well kept conservatory? It is so refreshing because it contains an abundant supply of moisture. We may secure an atmosphere very like this in our houses, if we will only make provision for free evaporation of water upon the stoves or in the hot-air furnaces by which they are warmed. Few people who keep water thus evaporating provide enough of it, and the result is, they do not realize any great benefit. In rooms, the air of which is properly moist, almost all common green-house plants will thrive, and we may have the fragrance of flowers in addition to the pleasant and healthful moisture.

Sea Weed Blankets for Dwellings.

M. E. Legou, in a recent report to the Paris Academy of Sciences, advocates the use of sea-weed between the thin outside walls of houses, for protection against sudden changes of temperature. This substance when not exposed to the light is unchangeable, does not ferment, will not readily take fire, and is entirely free from insects. Nothing is needed to prepare it, but a washing in fresh water to remove the salt, which would otherwise cause dampness. It has already been successfully applied between the tiles and ceiling of a railway station, in a portable house for camp use, and in the enclosures of temporary barracks. It is easily obtained along our whole coast, and may prove of important service in rendering the cheaper class of dwellings more comfortable.

Age of Meats.

We do not mean from the birth, but from the butcher. The Englishman would insist upon having his *beef* at least a week old, if the weather be not especially hot; his *mutton* not less than a month old; and other meats of such age as he has found them most savory to *his* taste. People of other nations think that meats require time—some more, others less—to come into their best condition for the table. In this country there is much more dread of *tainted* than of *tough* meats. While shunning Scilla, we have approached too near Charybdis. We often butcher in the evening and devour in the morning; and sometimes eat for breakfast that which was killed at sunrise. Except in case of necessity, this is not wise. Meats do not come into that condition in which they are most readily assimilated, and most nourishing, until some time after slaughtering—longer in cold than in warm weather, and longer with some kinds than with others, at the same season. Until then, they are tough, and although "there is no disputing of tastes," it must be admitted that they are, to a large majority of persons who have fairly made the comparison, less tasteful, if not absolutely unsavory.

For the American Agriculturist.

Rolled up Beef.

Cut pieces of beef, about as broad as a hand and ¾ inch thick, pound well, and add pepper and salt. Cut slices of bacon of the same size as the beef, roll the slices together, and tie them with a string. Boil with water enough to cover the meat; keep in a pot well closed. When the beef is tender, take it out, and also half the liquor; let the other half boil down, and then add the first half to it. Season with onions and salt to taste. Cut the strings off the beef and put on the table with the gravy. If to be used on the second day, boil it up again, cutting a pickle in the sauce, and it will be just as good. If to be kept for a time, put it in a dish and cover with fat. It will keep good for several weeks. MRS. NITZ.

Jefferson Co., Iowa.

How to Cook Eggs in the Shell.

A correspondent of the *Agriculturist* writes: "One way to cook eggs is to drop them into boiling water, and let them remain there three minutes—the water all the time boiling. This hardens the white next the shell to almost leathery toughness, while within it is still uncooked. Another and preferable mode is, to pour boiling water upon the eggs; let them stand in this 5 minutes; pour off this and add more boiling water and immediately bring them to the table *in the water*. Those taken out at once will be somewhat cooked through; and those left in five minutes will be "hard boiled," or nearly so, and thus the taste of every one may be suited and no toughness of the whites be observed."

PENNY WISE, POUND FOOLISH.—Undigested food in the stomach is sure to produce restless unrefreshing sleep, yet for the mere pleasure of tickling the palate for a few minutes longer while swallowing a little more food, how many suffer all night, and the next day also.

Cooking Indian Corn.

It may be well to state briefly here, what was more fully explained in last volume, viz.: that taking the average prices throughout the country, 40 cents worth of Indian corn meal, affords as much real, healthful *nourishment*, as $1 worth of wheat flour, or $1.00 worth of potatoes. Hence the importance of learning to use more corn for food in these times. In the November *Agriculturist* we gave thirty-three methods of using corn, or corn meal. An objection to many of the directions given, was that they called for considerable quantities of milk, or eggs, or both, and these are not always accessible or cheap. We hope our offered premiums will bring out something valuable on this subject. But this inside sheet must be sent to press before the exhibition opens, and our report, if published this month, must go in out of place on the outside sheet, which is sent to press ten days later. In the meantime, we desire to solicit further contributions of recipes or directions on this topic. Here are a few of those, gathered from our letter files.

Indian Loaves, *that will be good when four days old.* Sent to the *American Agriculturist* by Mrs. L. G. Smith of Essex Co., Vt. Take 2 quarts of Indian meal; 1 pint of sifted wheat bran; ½ ten-cupful of molasses; ½ teaspoonful each of salt and cooking soda or saleratus. Mix with sweet milk enough to make a batter as stiff as can be readily stirred with an iron spoon. Bake 6 hours.

Another Indian Loaf.—Contributed to the *Agriculturist* by Sarah Fuson of Fulton County, Ill. who has tested it satisfactorily for ten years past. Take 4 to 6 quarts of Indian meal and scald two thirds of it, stirring thoroughly with an iron spoon; cool with cold water until it will not cook the yeast, and add one pint good salt yeast. Stir in the remainder of the meal; put in a pan to rise, the same as light wheat bread, and afterwards bake well, and keep in a cool, dry place. Good when one to four days old.

Corn Meal Griddle Cakes.—J. S. Gerver, Williams Co., O., contributes the following to the *Agriculturist:* Take 3 cups of Corn meal, 1 cup of wheat flour; 1 cup of sour cream; 1 cup of sugar; 3 eggs; 1 teaspoonful of saleratus, and 1 teaspoonful of salt, with sweet milk enough to make a thin batter. Bake the same as Buckwheat cakes. It is good. [This must be very good when the eggs and cream are plentiful.—ED.]

Chicken Salad.

A friend who tried a chicken salad with us the other day, asked a minute description in the *Agriculturist* for the benefit of his better half and others. The recipe is a common one, for ought we know—perhaps it was used with special skill in the instance when our friend was so well pleased. Written minutely it reads thus: Mince finely the white parts of one chicken previously well boiled. Take blanched, crisp celery and chop very fine. With 1 measure of the minced chicken, mix 1½ measures of the chopped celery. Boil hard one large or two small eggs, roll the yolk fine, and mixing in a teaspoonful of mustard, and nearly as much salt, with ½ teacupful of vinegar, pour this over the chicken. Cut the boiled whites of the eggs in rings and lay on top, garnishing also with the smaller leaves of the celery.—Usually the celery is not chopped half fine enough.

Apple Pie without Apples.

One cup of water, one cup sugar, juice and peel of one lemon, 1½ or 2 Boston crackers broken into small pieces; bake with under and upper crust. The pieces of cracker look like apple when the pie is baked. The addition of a little stewed apple makes the deception complete—to eye and taste.

"IT SNOWS."
(Engraved for the American Agriculturist.)

The Editor with his Young Readers.

We wish "A HAPPY NEW YEAR" to you all, Young Friends. And we mean what we write. These words are often uttered flippantly, or for form sake; but just now we are both earnestly desiring the happiness of those who are to constitute the junior members of the great *Agriculturist Family* for 1863, and also seriously asking ourselves, what can we do to make our young friends really happy. We shall try to interest you somewhat, with short stories, anecdotes, puzzles, etc., which may be likened to the toys, nuts, candies, and sweetmeats, of an entertainment; but then the mind as well as the body needs some more substantial food—bread, meat, etc. An old and very true proverb is, that "All work and no play makes Jack a dull boy." Let us read it differently thus: All play and no work (or study) makes Jack a—*a what?* We will let you answer.

Start Right.

George, James, John.... Mary, Susan, Jane.... and all the rest! We suppose each one of you think now—as we often thought, when a boy—that you will do better in 1863 than you have done in any former year. That's right. We all ought to determine to improve more and more in every year that passes along. But mere wishing, and resolving, will never accomplish any good. Suppose James *wishes* to go a fishing, and having obtained permission from his parents, *resolves* to go early to-morrow morning. Does he rest satisfied with the wish and the resolution? No. He begins to think about the hooks, and lines, and poles, and bait. And he not only thinks and plans about them, but he goes to work at once in hunting them up and getting them ready. He lays specific plans, and begins to *do something*. In the morning he is up, and he *does something* at once; and he *keeps doing something* all day—walking, hunting a good place, or patiently holding the pole until his arms fairly ache, and at night he is rewarded with a heavy string of good fishes. What would you think of him if he sat still all the previous evening, and all the morning, and all the day, *thinking* how nice it would be to have a glorious nibble, and to haul out plenty of big fishes, and to bring home a string full? But how many boys and girls (and grown people too) sit and think over how nice it would be, to be kind hearted, obedient, amiable, lovable, to be able to curb an angry spirit, to avoid profane and unseemly words and thoughts, and to speak kindly to every one, even to the brutes; to do acts of kindness—in short, to have a good heart. Yet how often do they rest satisfied with the wish and the resolve, and even take credit to themselves for having these good wishes and resolutions, but *do* nothing. Now, young friends, when you think over some bad habit you wish to overcome, or some good habit you would wish to aquire, set right about the work of accomplishing the end. Lay your plans, just as James planned his arrangements for fishing. Begin now, and "hold on until the arm aches." Don't say, to morrow, or next week I shall begin, but begin *now*. Does that quick temper trouble you, set a watch over it now, and the very first time it begins to rise, remember your resolve, and check it at once. Keep repeating the same effort, every time there is occasion, and by and by you will master it. Hold the pole until your arm aches, and you will catch the desired fish. Firm resolutions, with well defined plans, and prompt action, will accomplish wonders. *Start right.* Begin *now*; keep at it through the year; and at its close, if you live till then, you will look back with pleasure upon the year 1863. Begin now, to day, this hour. *Start right*, and then hold on even "if the arm does ache."

An Adroit Thief.

A thief in England, who had been long watching an opportunity to steal from a certain house, one day saw both the owner and his wife go out, and immediately entered the premises to improve the opportunity. He proceeded up stairs and seized a feather bed, the most valuable article he could see, and commenced carrying it down stairs, walking *backward*. When about half way down, the owner entered the front door, and exclaimed, "Here you rascal, what are you doing?" "Taking this bed upstairs sir," was the reply. "Mr. Jones who says he is an old friend of yours, and is coming to spend a few weeks with you, sent me here to bring his bed." "Mr. Jones! I don't know Mr. Jones; what right has he to invite himself into my house? Clear out. "Very well, sir," replied the thief, coming down stairs with the bed, "but Mr. Jones will be powerful mad." And away he went with his load, leaving the family to discover their loss at bed time.

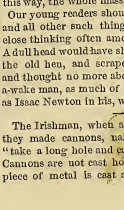
The Adopted Larks.

A gentleman in England relates that he found a nest full of young meadow larks, the mother bird having been killed by a stroke of the scythe while on her nest. It happened, that a robin had made her nest near his dwelling, and had just commenced sitting. He took the young larks, and watching his opportunity when the robin was away, removed the eggs, and putting the birds in their place, remained near to watch the result. The robin soon returned, and was just about to hop in, when she discovered the birds. She raised her wings, and stood as though greatly astonished. She looked at them first with one eye, then with the other, turning her head in a most comical manner. In a few moments she flew swiftly away, but almost immediately returned with the male robin, who manifested as much surprise as his mate had done. They chirped and chattered together at a great rate, earnestly discussing this unexpected state of affairs, and then suddenly darted away. The gentleman supposed they had decided to desert the little foundlings, but presently they both came back with food in their bills, and from that time reared them as tenderly as though they had been their own.

Whitening Sugar—A Curious Discovery.

The common sugar of our tables is made from the juice of sugar-cane, which grows only in very warm countries. This sugar cane resembles the stalks of our Indian corn, though its juice is much sweeter. In making sugar, the cane is cut into short pieces, and passed through a mill to press out the juice. This liquid runs off into a reservoir, from which it is dipped out into boilers, and boiled down. This process sends off the watery part of the sap in steam, leaving the sugar behind. When it is boiled down to syrup, this is put into large wooden trays called coolers. Here it becomes grain sugar.

But what a dark, dirty, brown mass it is! Can it be whitened? Yes, and here we will tell how man first learned to do it. A hen that had walked through a puddle of clay and water, went into a sugar-house, and walked over a pile of brown sugar. Some one noticed that wherever she stepped, the sugar was whitened. This man opened his eyes wide, and by several experiments soon discovered the fact that moist clay would whiten sugar!—And that man's discovery led on to a systematic use of earthen jars, shaped like the annexed cut, and hence came the old-fashioned "loaf-sugar." The raw sugar is put into one of these long jars, with the widest end upward. When the jar is nearly full of sugar, clay is put on the top and kept constantly wet. The water runs through the clay and sugar, and finds its way out through a small hole at the bottom of the jar. In this way, the whole mass of sugar becomes white.



Our young readers should watch even hen-tracks, and all other such things, for sharp looking and close thinking often amount to something useful. A dull head would have shouted "Shoo!" shoo!" to the old hen, and scraped off her muddy tracks, and thought no more about it. Not so this wide-a-wake man, as much of a philosopher in his way, as Isaac Newton in his, when he saw the apple fall.

*

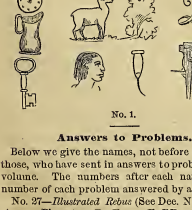
The Irishman, when asked by some jokers how they made cannons, naively answered that they "take a long hole and cast some iron around it." Cannons are not cast hollow at all, but one solid piece of metal is cast and afterward bored out.

A Boy Regiment—Good.

We have just heard that in a certain County (name and location not given,) there were a large number of patriotic boys, very desirous of doing something for their country in these times; but their ages, (13 to 16,) prevented their being received as volunteers in the army. But they did the next best thing. A regular regiment was formed, with Colonel, Major, captains, lieutenants, corporals, etc., and all were fully armed, not with guns and swords, but with good buck-saws and axes,—a few of them as "engineers" and "sappers and miners," carried beetles and wedges. They organized under the name of "The Wood Cutters' Regiment." Thus organized, they sent out all through the county, "scouts," who hunted up every family from which an adult had gone forth to the war. The volunteers then separated into "divisions," "companies," and "battalions," and commenced a vigorous assault upon the wood-piles of all these families, and made short work of cutting up a good winter's supply of fuel. "Foraging parties," with teams, procured and hauled wood, where a supply was not on hand. The regiment will not disband before Spring, but keep up the battle until the enemy, under Gen. Frost, is compelled to retire to the northern borders of Queen Victoria's American Possessions. Good for these young soldiers, we say. Here is an example worthy of universal imitation. Let us have such a regiment in every county in the country. Send us the names of the regiments, and the officers, and we shall gladly publish them in our roll of honor. Every private in such a regiment will be a "high private."—One hint more. While about it, don't stop with the families of soldiers. Let the scouting parties enrol the name of every poor widow to be found, and let them be defended against any possible disturbance from Gen. Frost. We recall, with pleasure, the fact that in more peaceful times we once held a captain's commission, in a company organized to supply and cut wood for each family in the neighborhood whose natural provider was dead, or disabled by sickness. Never shall we forget the pleasure experienced by every member under our "command" when we deposited ten loads of wood at a door where the man of the house was sick, and the family were in bed at mid-day, *to keep warm*—their last stick having been burned up the day before. If boys ever chopped wood with a will, it was on the afternoon of that day. If ever boys went to bed feeling joyful, it was our company on the night of that day.—When, and where shall we hear from the second wood-sawers' regiment for this Winter?

Problems, Puzzles, etc.

Under this head we shall try to furnish some amusement, combined with instruction, for our young readers. Unfortunately we have only room in this paper for the Illustrated Rebus below, which conveys a good sentiment. It is so easy, that the very little folks can probably read it, we think.



No. 1.

Answers to Problems.

Below we give the names, not before reported, of those, who have sent in answers to problems in last volume. The numbers after each name tell the number of each problem answered by any one.

No. 27—*Illustrated Rebus* (See Dec. No., page 375. *Answer:* Piece two Bs E cur E RE quires J UST ice—or thus: *Peace to be secure requires Justice.*

No. 28—*Enigma.* Answer: Drill.

No. 29—*Puzzle.* Answers: 1st. T-h-a-t—2d. I-i. Correct answers received from: Wm. J. Badger, 24; D. Wightman, 21, 22; Corley B. Shoemaker; Edward T. Moore, 25, 26; Jarvis H. Arnold, 25, 26; J. K. Mentzer, 25; "Amateur," 25, 26; H. Elliott McBride, 26; Torrey Kirk, 25, 26; "F. B. C.," 26; Walter S. Wales, 25, 26; Frank Fancher, 25; J. R. Parkison, 25; Emily Clark and Ella Skilton, 25, 26; Ellery W. Newton, 25, 26, (would like to see the enigma, but can not promise to publish it); "E. D.," 26; Isaac P. Mclaine, 26; "T. A. A. A. A. R. and J. C. Murray, 25; U. F. Hallenbeck, 25; Robert M. Taggart, 25, 26; J. W. Freley, 25; "Americus," 25, 26; Alfred W. Wolcott, Co. B, 4th Reg. Iowa Volunteers, stationed at Rolla, Mo., 25; James V. Grey, 25; C. L. and A. C. Sievers, 25; Geo. B. Hedges, 25; C. L. Yest, 25; Benjamin F. Hoyt, 25, 26; J. W. Chisholm, 26; Sarah H. McBarney, 25; H. Z. Cande, 26; Ellen Forbes, 25; E. Washburn, 26; John Strinkard, 25, 26; Martin Edwards, 25, 26; Katie M. Humphrey, 25; W. Jay, 25; A. Coombs, 25; Mary Gifford, 25; Edgar Holcomb, 26; Augustus Reifstack, 25; H. F. Miles, 25; Franklin M. Rose, 28, 29; Nathan Tyler, 28, 29; Jarvis H. Arnold, 27, 28, 29; Ella C. Marshall, 29; L. E. Rockwell, 29; Mary A. Elliott, 27, 28, 29; Sarah Elliott, 27; Sophey Joice, 28, 29; Jessie Maylund, 28, 29; Rufus W. Weeks, 27, 28, 29; Misses Emma Littell, Hattie and Amanda Banks, 27, 28, 29; Charles L. and Sallie M. Siewers, 27, 28, 29; H. B. Jackson, 29; Andrew S. Miller, 28; Amos M. Peck, 29.

A Royal Barber.

Joseph II, emperor of Austria, was fond of traveling incognito, or in citizen's dress. One day he reached a little inn on his route, before the rest of his company came up, and entering into a retiring room, he commenced shaving himself. The inquisitive landlord was anxious to know what post his guest held in the emperor's retinue, and inquired. "I am his *barber*," was his majesty's reply.

Only a Sample.

The comic Burton, while sailing up the Hudson River, took his seat at the dinner table, and called for a beefsteak. The waiter brought him a very small piece, only enough for a taste. Mr. B. took it upon his fork, turned it over, examined it particularly, and with a comical look exclaimed: "Yes, that's it, bring me some."

"Fred," said a little four-year old, "give me sixpence to buy a monkey." "We've got one monkey in the house now," replied the elder brother. "Who is it, Fred?" asked the little fellow. "*You*," was the reply. "Then give me sixpence to buy the monkey some nuts." His brother "shelled out."

EXTRAORDINARY EXHIBITION.

"KING CORN" in Royal Array—Immense display of CORN BREAD, CORN CAKES, etc. Over 200 Specimens from all parts of the Country, with Specifications for Making each—Interesting and Valuable Information.

In November last we stated that, taking into account the current prices of Corn, Wheat, and Potatoes, in different parts of the country, West as well as East, and estimating the relative proportion of healthful nutriment furnished by a bushel of each, it seemed evident that

A similar amount of nourishment would be obtained from:

40 Cents expended in purchasing CORN.
100 Cents expended in purchasing WHEAT.
160 Cents expended in purchasing POTATOES,

and that with the present large crop of Indian Corn, and the great foreign demand for Wheat, it was especially important to use more corn for food, and save our Wheat to sell.—In order to call out information upon the best methods of *cooking* Indian corn meal, we proposed, in the *December Agriculturist*, to have an exhibition of Corn Bread, and Corn Cake at our office on December 14th.—Premiums of $10, $5, and $2, were offered for the best, second best, and third best loaves of Bread, consisting mainly of Corn meal; also an extra premium of $1 for the best loaf of Cake of any kind in which corn meal should be the chief ingredient. *A Special Cake Premium*.—As the extra premium of $4 for Corn Cake was limited somewhat by the *cost*, we afterward decided to add to our published premiums a special premium of $2 to be awarded to the *Best Corn Cake of any kind, without regard to cost*. The main requisites for the BREAD were to be: *cheapness*, fair quality, and adaptability to *general family use*, eaten cold, as well as hot, and when from one to three days old. Full directions for making were to accompany each loaf.

Not having advertised the exhibition, beyond the single announcement in this journal, and not receiving many responses in advance, we began to fear the war would divert attention from what appeared to us to be an important enterprise for the public. But Thursday morning (Dec. 12th,) specimens began to arrive; Friday morning the Express Companies, and others, called freq ently, with from one to a dozen loaves; Saturday morning the inflowing current grew stronger and larger, until finally the entries reached over *two hundred* (**219**). Several entries being for duplicated loaves, the entire number of specimens reached some **250**! As will be seen below, these came from the distant West, from the Middle States as far South as Maryland, and from the North and East. A space of *seventy four feet* of wide table room was closely filled with a most imposing display of loaves of all sizes, from nearly half a bushel down to patty-pan corn meal biscuits, and small corn meal crackers—and not bad crackers either. There were pure corn meal loaves, and loaves of "Rye and Indian;" loaves one part wheat or rye flour with three parts corn meal, and loaves apparently half meal and half flour, with loaves of every intermediate combination. There were pumpkin loaves, corn meal dodgers, corn meal pound cake, corn meal pone, corn meal crullers, corn meal "nut-cakes," corn meal baked puddings, and corn meal what-nots. There were round loaves, square loaves, high loaves, and flat loaves—in short, loaves of every conceivable form and shape, for of the two hundred and fifty-odd specimens, scarcely two were alike in form and mode of making. The sight was one to gladden not only the hungry, but to cheer the heart of every patriot when he remembers that corn is our native cereal, that it grows every where and in abundance, that it is at yet untouched by any disease, that it is healthful and nourishing, and that to-day one, with cash, can buy from ready sellers at the West, more bushels of corn at 15 cts. a bushel than there are bushels of wheat now on the Continent. The exhibition showed at a glance the great variety of palatable forms in which corn meal can be worked up.—Under or by the side of each specimen were placed the directions for making it. The large concourse of visitors, numbering by thousands, were both surprised and gratified, and many went away resolved to henceforth largely increase their family purchases and use of corn meal. The general feeling seemed to be that of a good farmer housewife from Central New-Jersey, who brought in a noble loaf, expecting to get the first prize among a few competitors. She exclaimed "Wall, wall, this beats all. Why I'd hold a thought it? I always stood up for using corn, but I never did think so *many* things could be made of it. Corn IS King." *We* certainly felt much as she did.

At the urgent request of many gentlemen who wished to bring in their wives and daughters, we concluded to continue the exhibition over until Thursday, and on the evening of that day handed over to the Ladies' Five Points Mission enough to feed many hundreds of poverty stricken ones under their care or over-sight—a source of satisfaction certainly to the many whose fair hands had mixed and fashioned these loaves. The good keeping quality of most of the specimens was well tested by this delay.

The general results of the exhibition can but be widely useful, not only to the visitors, and to our own readers who will, in future numbers of the *Agriculturist*, find a hundred or more of the best recipes, but the Editors of other journals were present and made notes, and will send abroad the hints and suggestions they here derived. The public notice thus drawn to the subject will awaken far more general attention to the value of Indian Corn. We regret that our January number is so nearly closed up that we can only give this month,

A CONDENSED GENERAL REPORT.

The specimens, as they came in, were entered in a book, numbered from **1**, upward, the name and location of the exhibitor removed, and the directions placed upon the table with the loaves. In this way the Committee of Judges had before them the directions for each specimen, while they had not the slightest clue to the name or location of any exhibitor. They made their notes and decisions by the entry *numbers* alone.

The exhibitors, at least, will be interested to see how that the committee of judges were carefully selected. The first named is a practical baker of Flushing, N. Y., of experience and good judgment; the second for a long time a baker of this City, was named to us by others in the same business, as one who would exercise sound discretion and good taste; the third, a well known farmer of Westchester County, whose large experience as an exhibitor, manager, and judge, at various agricultural fairs was useful as the overseer. The three ladies we know to be good housekeepers. The first-named resided long in the South, where they pride themselves on good "corn

ocan"; and the same may be said of the second, substituting West for South. Prof. J. A. Nash, formerly Agricultural Professor in Amherst College, acted both as judge and secretary to the committee, making careful notes of all the examinations. The Committee commenced their labors early on Saturday morning—cutting and tasting each specimen, and examining the specifications. They continued until a late hour, and on Monday morning they met and spent most of the day in going over the whole ground, to revise the notes of the previous day. So much for the general arrangements. We have this month only space remaining for the Committee's report, and list of exhibitors. To those who took the time and trouble, and incurred the expense of sending their contributions to this Exhibition, we desire to return hearty thanks, both for ourselves, and in behalf of the public, for we are assured that great public good will yet come of the interest awakened by the exhibition.

Judges' Report.

The undersigned, requested to act as a Committee of Examination and Award at the exhibition of Corn Meal Bread, Cake, etc., held at the office of the *American Agriculturist*, Dec. 14th to 18th, 1861, have discharged their duty to the best of their ability, and respectfully report: We found the number of entries 219, while the duplicate specimens included in the same entries raised the total number of specimens to about 250. We confess to a feeling of no little surprise and gratification at the large and interesting variety contributed. The long, closely packed tables presented a sight of unusual magnitude that we had ever before seen, or conceived. It has been truly gratifying, to us at least, to find how great the variety of uses that can be made of our great national cereal crop, and we are fully convinced that few persons can be aware how well adapted this material is to supply not only a cheap, wholesome diet, but also for making, with suitable additions, a great variety of most palatable cakes, etc. We found excellent corn meal pound cake, fruit cake, crullers, biscuit, breakfast cake, etc., in addition to numerous loaves of first rate bread made with various proportions of wheat or rye flour, eggs, sugar, molasses, pumpkins, etc. Of all the specimens exhibited, a large proportion were "fit food to set before a king," and there was not one that would afford any reasonable grounds of complaint to the most unreconciled to unsatisfactory "eat this or starve." Of the whole number, we scarcely found two exactly alike, either in form or specifications for making. The sweetness, lightness and good quality of several loaves three to five days old, consisting of one part of corn meal to from two to four parts of wheat flour, shows that this proportion may well be adopted not only in families, but in the food for soldiers; and we would respectfully suggest to those in charge of this department of the Government to look into the subject. The comparative economy in the use of which would soon save a hundred thousand dollars, in feeding our vast armies, while the small admixture of one-fourth to one-third of corn meal makes a much less tenacious, and therefore more healthful bread, than one composed entirely of fine flour.

CORN MEAL BREAD.

As the conditions of the premiums required *cheapness* as well as *fair quality*, we could not take into account a large number of excellent loaves of "Rye and Indian," wheat flour with meal, loaves containing eggs, etc. After selecting fifty of the best, and re-selecting again and again, we finally decided that Nos. 84, 21, and 198, came nearest to the requirements of the offered premiums. The specifications furnished were as follows:

No. 34.—"Take 3 quarts of corn meal, with about a pint of (thin) bread "sponge," and water enough to wet it. Mix in ½ pint of wheat flour and a tablespoonful of salt. Let it rise, and then knead well the second time. Bake 1½ hours."

This loaf was of beautiful form, cut light, and was of fair quality when three or four days old. Except in color and difference in taste, it resembled a wheat flour loaf.

No. 21.—"Mix 2 quarts of new corn meal with 3 pints of warm water. Add 1 tablespoonful of salt, 2 tablespoonfuls of sugar, and one large tablespoonful of hop yeast. Let it stand in a warm place 5 hours, to rise. Then add ¾ pint (or 1¾ teacupfuls) of wheat flour and ¾ pint of warm water. Let it rise again 1½ hours; then pour it into a pan well greased with sweet lard, and let it rise a few minutes. Then bake in a moderately hot oven, 1½ hours. It is *best* when hot."

This was a beautiful, almost crustless loaf, of a pleasant sweetish taste, and good quality. The bottom part was a little heavy, as if not baked quite enough, or not raised sufficiently, but a commendable bread, and rather more palatable than No. 34.

No. 198.—"Take 2 quarts of white corn meal, 1 tablespoonful of lard, 1 pint of hot water. Mix the lard in water; stir it well, that it may get heated thoroughly, and add ½ pint of cold water. When the mixture is cool enough, add 2 well-beaten eggs, and 2 tablespoonfuls of home-made yeast. Bake 1 hour, in a moderately heated oven. If for breakfast, make over night."

This, owing to the whiteness of the meal, and the lightness of the texture, as well as the general appearance of the loaf, greatly resembled the ordinary loaf of wheaten bread on our tables, and is worthy of general adoption where eggs are sufficiently plentiful.

For *taste and quality* the above three would stand in order of merit, 198, 21, 34. But taking into account not only taste and quality, but *cheapness* and *little trouble in making*, or "adaptation to general every day family use," we unanimously award as follows:

First Premium of $10 to Number 34.*
Second Premium of $5 to Number 21.
Third Premium of $2 to Number 198.

CORN MEAL CAKE.

In this class there were a great variety of specimens. Many of them were very good, and several must be *first-rate* when eaten hot or warm. As cheapness as well as quality were to be taken into account, we finally decided to award the

Corn Meal Cake Premium of $4 to Number 166, made as follows: "Take 3 teacupfuls of corn meal, one teacupful of wheat flour, 2 tablespoonfuls of brown sugar, 2 teaspoonfuls of cream of tartar, and 1 teaspoonful of salt. Mix well together *while dry*. Add 1 teaspoonful of soda (or saleratus) dissolved in warm water. Add the whole to a thin batter, and bake in a quick oven, ¾ hour. The same batter will bake quicker in patty pans, or on a griddle, like buckwheat cakes."

A Special Premium was placed at our disposal to be awarded to the best Corn Meal Cake of any kind, without regard to cost. This was a difficult task, as there were many specimens all worthy to be called "best;" but after extended examination and consultation, we unanimously agreed to award

Premium of $2 for best Cake of *any kind* to No. 125, Made as follows:

Take eight eggs, and their weight in powdered sugar; the weight of six eggs Indian meal; ½ lb. butter, and one nutmeg. Beat the whites and the yolks of the eggs separately; adding the whites last; bake one hour.

The Committee would gladly mention many other excellent specimens both of Bread and Cake, but we learn that it would render the report too long for immediate and general publication. We will, however, append to this report, memoranda made during the examination, which can be published hereafter, as we understand it to be the design to print in the *Agriculturist* a more full account of the different specimens. We must, however, call attention to No. 140, a most excellent cake or pudding suitable for breakfast, or for any other meal, as we found it delicious when eaten cold, and five days old. The directions are as follows:

No. 140.—"Take 2 cups corn meal, 1 cup wheat flour, 1 teaspoonful salt, 2 teaspoonfuls cream of tartar, 1 teaspoonful of soda, 3 eggs, 3 tablespoonfuls sugar, 1½ pints milk, and 1 tablespoonful butter. Rub meal, flour, salt, soda and cream tartar through a sieve, which will mix them thoroughly. Then beat the eggs and sugar together, adding to them the butter melted. Next add the milk, and last of all stir in the previously mixed meal, flour, salt, soda and cream tartar. Bake immediately and rapidly, to secure the escaping gas.) Twenty minutes will finish it in a brisk oven."

In conclusion the Committee desire to return their thanks in behalf of themselves and the public, to the proprietor of the *American Agriculturist* for originating and carrying out this most interesting and useful exhibition, and they award to him a special Honorary Diploma. Our own task has been a laborious and difficult one, but it has been cheerfully performed, and we have found ourselves intensely interested and gratified, and the knowledge we have ourselves acquired has rewarded our labors a hundred-fold. (Signed)

John S. Pittman, Mrs. Wm. T. Hemmenway, Alexander Lang, Miss Sarah C. Stewart. W. S. Carpenter, Mrs. } Committee.

New-York, Dec. 18th, 1861.

SUCCESSFUL COMPETITORS.

*The names of the successful competitors, which were wholly unknown to the Judges, are as follows:

No. 34.—Mrs. Jane O'Brien, Carrick, Allegany Co., Pennsylvania.

No. 21.—Mrs. Lott Cornelius, Locust Valley, Queens Co., Long Island, N. Y.

No. 198.—Mrs. R. Flanklin, Annapolis, Maryland.

No. 166.—Mrs. W. A. Jenkins, Bedford Avenue, Williamsburgh, N. Y.

No. 125.—Mrs. H. A Judd, Rome, Oneida Co., N. Y.

(We are glad to find a "nameless" successful in exhibiting the merits of "King Corn." Though wholly a stranger to us until after receiving the Judges' Report and referring to the clerk's entry book to find who sent in No. 125, we are inclined to think there must be some relationship, even though distant.—Ed.)

No. 140.—Miss C. A. Belknap, Kent-av., Brooklyn, N.Y.

As previously hinted, we shall hereafter publish many of the best recipes or directions in our regular Household Department. Owing to the late date, we can only find room now for the few recipes given in the Judges' Report.

LIST OF ENTRIES.

REMARKS.—The specimens were numbered as below, in the order received. In many cases the same contributor sent duplicate specimens of bread, cake, etc., so that the actual number of loaves considerably exceeded the numbered entries.—Through the fault of the express carriers, or otherwise, the specimens numbering above 207 did not arrive until Tuesday morning, Dec. 17, after the Judges had made their award. We suppose nearly all the contributions came from Ladies, but where only the initials were given, we are in doubt whether to write *Mr.* or *Miss*, and accordingly omit the prefix.

No. 1—Mrs. D. R. Pope, Susquehanna Depot, Susq. Co., Pa.
2—Mrs. Louis C. d'Homergue, Metuchin, Middsex Co., N. J.
3— do. do.
4— do. do.
5—Mrs. H. C. Compton, Plainfield, Essex Co., N. J.
6—Mrs. Bascome, New York City.
7—H. M. Cary, Factoryville, Staten Island, N. Y.
8—Miss R. Hadwick, Hempstead, Queens Co., N. Y.
9— do. do.
10—Mrs. H. W. Jamison, Glens Falls, Warren Co., N. Y.
11— do. do.
12—Mrs. J. R. Lasher, Nyack, Rockland Co., N. Y.
13— do. do.
14— do. do.
15—Mrs. John R. Fales, Rhode Island.
16—Miss Emma Thornal, Metuchin, Middlesex Co., N. J.
17— do. do.
18—Mrs. H. Smith, Squan Village, Monmouth Co., N. J.
19— do. do.
20— do. do.
21—Mrs. H. Atwater, East Farms, Hamden Co., Conn.
22—Mrs. C. B. Miner, Greenville, New-London Co., Conn.
23—H. Hobbs, Huntington, Suffolk Co., N. Y.
24—Mrs. Lott Cornelius, Locust Valley, Queens Co., N. Y.
25— do. do.
26—A. Chapin, Irvington, Westchester Co., N. Y.
27—Mrs. S. S. Sharp, Harlem, New-York City, N. Y.
28— do. do.
29—Mrs. John Housel, Copper Hill, Hunterdon Co., N. J.
30—Miss M. A. Gibson, White Plains, Westchester Co., N.Y.
31—Miss J. W. Thurber, New Utrecht, Kings Co., N. Y.
32—Mrs. E. Blake, Middletown, Middlesex Co., Conn.
33—Mrs. Wm. Wilcox, Guilford, New Haven Co., Conn.
34—Mrs. Jane O'Brien, Carrick, Allegany Co., Pa.
35—Mrs. Stephen Hoyt, New Canaan, Fairfield Co., Conn.
36—Hannah Snow, Waterford, Camden Co., N. J.
37—Miss Annie Bell, Hanesville, Kent Co., Md.
38— do. do.
39—Mrs. Elizabeth Woolsey, Churchville, Harford Co., Md.
40—Mrs. M. J. Davis, near Milford, Kent Co., Del.
41—S. B. Pettit, Gates-ave., Brooklyn, Kings Co., N. Y.
42— do. do.
43—S. S. J. Pine, Hauppaug, Suffolk Co., N. Y.
44— do. do.
45— do. do.
46—Miss P. Pyne, Plainville, Hamilton Co., O.
47—A Lady, Flushing, Queens Co., N. Y.
48—E. Wilson, Wyckoff's Farm, Williamsburg, Kings Co., N. Y.
49—Miss L. J. Prime, West Flushing, Queens Co., N. Y.
50—Mrs. S. Hand, Rye, Westchester Co., N. Y.
51— do. do.
52—Mrs. S. Overton, Sayville, Suffolk Co., N. Y.
53— do. do.
54—M. A. H. Rowe, East Chatham, Columbia Co., N. Y.
55— do. do.
56— do. do.
57—Mrs. C. W. Powers, Sharon Station, Dutchess Co., N.Y.
58— do. do.
59— do. do.
60—Mrs. Wm. Robotham, Newark, Essex Co., N. J.
61—Mrs. P. Knox, Bedford Station, Westchester Co., N. Y.
62—Sarah J. Fanning, Southampton, Suffolk Co., N. Y.
63—Miss E. Merritt, Newburg, Orange Co., N. Y.
64— do. do.
65— do. do.
66— do. do.
67—Mrs. James Ballard, Clinton Hill, Hudson Co., N. J.
68—M. T. Willis, Syosset, Queens Co., N. Y.
69— do. do.
70—Emma J. Epes, Byberry, Philadelphia Co., Pa.
71— do. do.
72—Mrs. H. Burdett, Fort Lee, Bergen Co., N. J.
73—Mrs. J. R. Green, Cambridge, Washington Co., N. Y.
74— do. do.
75—Harriet B. Newell, Westport, Fairfield Co., Conn.
76—Mrs. R. Henley, Leicester, Addison Co., Vt.
77— do. do.
78—Adeline C. Belknap, (no address.)
79—E. H. Noble, Jenkintown, Montgomery Co., Pa.
80— do. do.
81—Mrs. Erskine Moody—no address.
82—Mrs. Wm. Keles, Wethersfield, Hartford Co., Conn.
83—Mrs. N. Dean, New-York City.
84—Mrs. E. Moseley, Springfield, Hampden Co., Mass.
85— do. do.
86—P. Jane Thorne, Falls Village, Litchfield Co., Conn.
86—Mrs. Eliza Osmond, Westport, Fairfield Co., Conn.
87— do. do.
88—S. B. B. Williams, Norwich, New-London Co., Conn.
89— do. do.
90—Cornelia Maguire, So. Manchester, Hartford Co., Conn.
91—Mrs. G. H. Mead, Cornwall, Orange Co., N. Y.
92—Mrs. Dorcas Wilcox, Fairfield Co., Conn.
93— do. do.
94—Mrs. D. E. McAuley, Wilton, Fairfield Co., Conn.
95—Mrs. C. F. Moeller, Wilton, Fairfield Co., Conn.
96—Hannah Sweet, Lancsfield, Conn.
97— do. do.
98— do. do.
99—Sarah S. K. Mansfield, Fairhaven, New-Haven Co., Ct.
100— do. do.
101—Dora B. Robinson, Flatbush, Kings Co., N. Y.
102—Mrs. G. W. Bradstreet, Durham, Middlesex Co., Conn.
103— do. do.
104—Mrs. J. H. Fullerton, Yorkville, New-York Co., N. Y
105— do. do.
106—F. L. Collins, Lime Rock, Litchfield Co., Conn.
107—Mrs. Barnes, Brooklyn, Kings Co., N. Y.
108— do. do.
109— do. do.
110— do. do.
111— do. do.
112—Mrs. J. E. Macomber, Portsmouth, Newport Co., R. I.
113— do. do.
114—Mrs. Geo. S. Jacobs, Feltonville, Middlesex Co., Mass.
115—Mrs. Ben. F. Chase, So. Portsmouth, Newport Co., R. I.
116— do. do.
117—Mrs. B. S. Arnold, Woonsocket, Providence Co., R. I.
118— do. do.
119—J. G. Dennis, Portsmouth, Newport Co., R. I.
120—Mrs. S. B. Allen, Fall River, Bristol Co., Mass.
121— do. do.

122—Mrs. E. E. Perry, Central Falls, R. I.
123—Mrs. John Allison, Newburg, Orange Co., N. Y.
124—H. A. Judd, Rome, Oneida Co., N. Y.
125— do. do.
126—Mary A. Castle, Ilion, Herkimer Co., N. Y.
127—Emily A. Tanner, Clarkstown, Rockland Co., N. Y.
128— do. do.
129— do. do.
130—Emma L. Freeman, Harlem, New-York Co., N. Y.
131 do. do.
132—Mrs. Wm. Hinton, Williamsburg, Kings Co., N. Y.
133—Mrs. R. W. Cooley, Binghamton, Broome Co., N. Y.
134— do. do.
135—Mrs. R. B. Pratt, Homer, Cortland Co., N. Y.
136— do. do.
137—Mrs. S. V. Niles, Pleasant Mount, Wayne Co., Pa.
138— do. do.
139—Mrs. D. M. Sturtevant, Newark Valley, Tioga Co., N.Y.
140—Miss C. A. Belknap, Kent-av., Brooklyn, K'gs Co., N.Y.
141—Mrs. A. D. Weymouth, Fitchburg, Worces'r Co., Mass.
142—No name.
143—Mrs. J. T. Andrews, Nashua, Hillsborough Co., N. H.
144—Mercy Newton, Norwich, New-London Co., Conn.
145—Mrs. J. G. Caldwell, Ravenswood, Queens Co., N. Y.
146—S. Orr, Bowdoinham, Sagadahoc Co., Me.
147—Mrs. Lucy W. Kimball, New-London, N. Lon'n Co., Ct.
148— do. do.
149— do. do.
150— do. do.
151—Mrs. M. C. Walker, Lincoln, Middlesex Co., Mass.
152— do. do.
153—Mrs. D. S. Woodward, Lebanon, New-London Co., Ct.
154—A. A. Simmons, Stillwater, Sussex Co., N. J.
155—R. McDonald, Fulton Hotel, New-York City.
156— do. do.
157—Mrs. R. Gnruec, Monsey, Rockland Co., N. Y.
158— do. do.
159—L. E. Palmer, Humphreyville, Luzerne Co., Pa.
160— do. do.
161—Mrs. W. H. Cowl.
162—Mrs. Van Slyke, New-York City.
163—Mrs. M. C. Turner, New-York City.
164— do. do.
165—Miss Wood, New-York City.
166—Mrs. W. H. Jenkins, Brooklyn, (E. D.) Kings Co., N.Y.
167— do. do.
168—Mrs. W. H. Dodge, Brooklyn, Kings Co., N. Y.
169—New-York Mutual Baking Company.
170— do. do.
171—R. Fancher, New-York City.
172—Mrs. T. B. Smith, Tappan, Rockland Co., N. Y.
173— do. do.
174—Mrs. W***, New-York City.
175— do. do.
176—Mrs. Davis, New-York City.
177— do. do.
178—Jessie Bagg, New-York City.
179— do. do.
180— do. do.
181—E. F. P., Astoria, Queens Co., N. Y.
182—Mrs. John Ashcroft, Brooklyn, Kings Co., N. Y.
183—Mrs. L. Ryerson, Meads Basin, Passaic Co., N. J.
184— do. do.
185— do. do.
186—Mrs. George Wales, Rochester, Monroe, N. Y.
187—Arabella Culverwell, Laporte, Laporte Co., Ind.
188—Mrs. H. Edwards, Ceres, Allegany Co., N. Y.
189—Clarissa Edwards, Little Genesee, Allegany Co., N. Y.
190—Mrs. O. Comstock, Avon, Livingston Co., N. Y.
191— do. do.
192—Mrs. N. E. Adams, Stamford, Fairfield Co., Conn.
193—Mrs. Dr. W. C. George, Charlton, Worcester Co., Mass.
194—M. A. Park, Stratford, Fairfield Co., Conn.
195— do. do.
196—S. E. Deaver, Harford Co., Md.
197— do. do.
198—Mrs. R. Franklin, Annapolis, Anne Arundel Co., Md.
199—Mrs. C. M. Brooks, Centre Road, Crawford Co., Pa.
200— do. do.
201—Mrs. G. C. Kellogg, Brecksville, Ohio.
202—Mrs. F. J. Sawtell, Athol, Worcester Co., Mass.
203— do. do.
204—Mrs. M. J. Gilbert, East Westmoreland, Chesh. Co., N.H.
205—Mrs. H., Brooklyn, Kings Co., N. Y.
206—Mrs. E. A. Coon, Toulon, Stark Co., Ill.
207— do. do.
208—F. Stosser, New-York City.
209—Mrs. Joshua Read, jr., Pawtucket, Providence Co., R.I.
210—Mrs. E. J. Welsh, Brockwayville, Jefferson Co., Pa.
211—Mrs. E. A. Duncklee, Crown Point, Essex Co., N. Y.
212—Mrs. P. L. Cleaveland, LaGrange, LaGrange Co., Ind.
213—Mrs. M. Scofield, Brooklyn, Kings Co., N. Y.
214— do do.
215—Mrs. Barnes, Brooklyn, Kings Co., N. Y.
216—Jas. Morton, Brooklyn, Kings Co., N. Y.
217—F. & Chas. Beck, New-York City.
218— do. do.
219—Mrs. E. Scofield, Brooklyn, Kings Co., N. Y.

Market Review, Weather Notes, etc.

American Agriculturist Office.
New-York, Friday Morning, Dec. 20, 1861.

*** The materials for this review are furnished specially for the *Agriculturist* by a reliable man of long experience, who, throughout the year, spends the whole of each day in the markets, watching the transactions and collecting information, and we flatter ourselves that this report is one of the most correct anywhere published.

It will be seen by our condensed tables below, that the transactions in Breadstuffs in this market have fallen off, as compared with the previous month. This was, of course, to be expected, as the canals have been closed about half of the month previous to this date, and the receipts have necessarily been restricted. But in the second table we introduce a comparison which shows that business has been much larger in volume, than during a corresponding period last year. The increase is quite marked in the receipts of flour, corn, rye, and oats, and in the sales of flour, wheat, corn and rye. Of Barley the receipts have been heavier, but the sales much less. The sales of breadstuffs have been restricted, not only by a want of supplies, but especially by the high rates of freights to foreign countries on account of the risk of American vessels, by the difficulty at one time of selling bills of exchange, and recently by the news of excitement in England. It has been a matter of surprise even, that the prices are not more depressed in the present excitement. The table of prices below shows that flour averages scarcely 15 cents per barrel below the rates one month ago, while wheat, corn, and corn meal, are fully as high to day, as at the same date last month. But for the present unlooked for political disturbance abroad, prices would undoubtedly rule much higher, and should the present excitement blow over, without serious results, we shall look for a sharp upward turn of the market, owing to a positive and certain large demand, which can not be met with adequate supplies until spring navigation opens. So entirely convinced are the leading dealers in breadstuffs that we shall have only a diplomatic contest with England, that they hold stocks firmly .... There are few changes in the prices of the various articles of Trade. Cotton has advanced rapidly, owing to the very limited supply, and an active speculative demand....Wool has advanced 2 to 3 cents per lb. on some grades, with a good demand still prevailing....Pork has declined under the influence of the large receipts of live hogs at the market as noted below....There has been a fair demand and steady businesss in provisions, tobacco, hay, hops, naval stores, etc. The table below shows what changes have occurred in prices.

CURRENT WHOLESALE PRICES.

	Nov. 19.	Dec. 20.
Flour—Super to Extra State	$5 50 @ 6 00	$5 40 @ 5 85
Superfine Western	5 50 @ 5 65	5 35 @ 5 50
Extra Western	5 70 @ 7 00	5 60 @ 7 00
Fancy to Extra Genesee	6 00 @ 7 00	5 90 @ 7 00
Super. to Extra Southern	5 75 @ 8 50	5 70 @ 8 50
Rye Flour—Fine and Super.	3 10 @ 4 40	3 10 @ 4 50
Corn Meal	2 85 @ 3 30	3 10 @ 3 50
Wheat—Canada White	1 40 @ 1 50	1 45 @ 1 50
Western White	1 40 @ 1 53	1 44 @ 1 51
Southern White	1 45 @ 1 55	Nominal.
All kinds of Red	1 23 @ 1 44	1 24 @ 1 43
Corn—Yellow	69 @ 70	67 @ 68
White	70 @ 72	@ 70
Mixed	65 @ 67	66 @ 67
Oats—Western	46 @ 47	42½@ 43½
State	47 @ 48	43 @ 44
Rye	82 @ 84	82 @ 85
Barley	65 @ 87½	65 @ 80
Hay, in bales, per 100 lbs	60 @ 85	70 @ 85
Cotton—Middlings, per lb	24 @ 24¾	38 @ 40
Rice, per 100 lbs	6 75 @ 7 50	6 50 @ 7 50
Hops, crop of 1861, per lb	15 @ 23	16 @ 23
Feathers, Live Geese, p. lb.	30 @ 36	32 @ 38
Seed—Clover, per lb	Nominal.	7½@ 7¾
Timothy, per bushel	Nominal.	1 87½@ 2 25
Sugar—Brown, per lb	7¼@ 9¼	7¼@ 9½
Molasses, New-Orleans, p.gl.	50 @ 55	50 @ 55
Coffee, Rio, per lb	14½@ 17	17 @ 19
Tobacco—Kentucky, &c, p.lb.	8 @ 16	9 @ 17
Seed Leaf, per lb	6 @ 22	5 @ 20
Wool—Domestic fleece, p. lb.	40 @ 50	43 @ 53
Domestic, pulled, per lb	38 @ 47	36 @ 50
Tallow, per lb	9½@ 9¾	9½@ 9⅝
Oil Cake, per tun	30 00 @36 00	34 00 @40 00
Pork—New Mess, per bbl	13 50 @14 50	12 50 @12 75
Prime, new, per bbl	9 00 @ 9 50	8 50 @ 8 87½
Beef—Repacked mess	9 25 @12 00	11 50 @12 00
Lard, in bbls., per lb	8½@ 9½	8 @ 9⅛
Butter—Western, per lb	11 @ 15	11 @ 16
State, per lb	15 @ 20	16 @ 22
Cheese	5 @ 7½	6 @ 8
Eggs—Fresh, per dozen	16 @ 17½	19 @ 20
Limed, per doz		15 @ 16
Poultry—Fowls, per lb	8 @ 11	6 @ 9
Geese, per lb	5 @ 8	6 @ 8
Ducks, per lb	8 @ 12	8 @ 10
Turkeys, per lb	8 @ 12	8 @ 11
Partridges, per pair	30 @ 60	30 @ 62
Venison—per lb	6 @ 9	6 @ 10
Dried Apples, per lb	5 @ 6¼	5½@ 7½
Dried Peaches, per lb., peeled	15 @ 18	18 @ 20
Dried Raspberries, per lb	15 @ 16	15 @ 16
Potatoes—Mercers, p. bbl	1 50 @ 2 00	2 00 @ 2 25
Peachblows, per bbl	1 38 @ 1 50	1 50 @ 1 75
Western Reds, etc.—per bbl.	1 12 @ 1 25	1 25 @ 1 38
Nova Scotias—per bush	40 @ 45	42 @ 47
Sweet Delaware, per bbl	3 00 @ 3 50	3 00 @ 3 50
Onions—Red, per bbl	88 @ 1 00	1 00 @ 1 25
White, per bbl	1 25 @ 2 00	1 25 @ 1 75
Turnips—Rutabaga, per bbl.	50 @ 75	75 @ 1 00
Squash—Marrow, per bbl	75 @ 1 25	75 @ 1 00
Apples—Common, per bbl	1 50 @ 2 00	2 00 @ 2 50
Apples—good, per bbl	2 50 @ 3 00	3 00 @ 4 00
Chestnuts—per bushel	3 00 @ 3 25	2 50 @ 2 75
Hickory Nuts—per bushel.	75 @ 1 12	1 00 @ 1 12

TRANSACTIONS AT THE NEW-YORK MARKETS.

Receipts.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 days *this* month	705,000	3,159,500	2,361,000	203,975	260,000	1,469,000
27 days *last* month	836,000	7,148,000	3,109,000	119,600	344,000	712,500

Sales.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
25 days *this* month	778,000	5,641,000	3,229,000	204,000	276,000
27 days *last* month	795,000	8,998,000	4,521,000	123,300	335,000

COMPARISON OF RECEIPTS AND SALES TO SAME DATE LAST YEAR.

Receipts.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 days *this* year	705,000	3,150,500	2,361,000	203,975	260,000	1,469,000
25 days *last* year	480,809	3,691,500	778,000	14,120	167,800	817,000

Sales.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley*
25 days *this* year	778,000	5,644,000	3,229,000	204,000	276,000
25 days *last* year	508,319	4,267,500	2,147,500	115.400	634,700
Increase this year	169,681	1,373,500	1,081,500	88,600	

EXPORTS FROM NEW-YORK, JAN. 1, TO DEC. 17.

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Oats.*
1861	2,926,238	27,508,407	12,135,055	882,242	159,845
1860	1,824,121	12,943,256	3,361,476	450	103,051
Increase	1,102,117	14,565,151	8,773,579	881,792	56,794

N. Y. Live Stock Markets.—The Cattle Markets have not been so over crowded with animals of late as previously. The receipts for the past 5 weeks have averaged 4,217 per week, or near 1,000 less than last month. Prices have gradually advanced nearly 1c. per lb. above last month's quotations. At the market of Dec. 18 there were many extra fat, or premium bullocks offered for "Christmas beef" which sold at 9c.@10c. per lb., estimated dressed weight. Good beeves, 8c.@9c.; ordinary 7c.@7½c.; and poor 5c.@7c. Average of all sales 8c. and everything sold off clean.

Veal Calves.—Receipts for the past 5 weeks number 2,809, or 562 per week, varying but little in supply or prices from the previous month. Good veals are worth 5c.@5½c. per lb. live weight. A mammoth calf, 8 months old, weighing 810 lbs. sold for $40, last Tuesday.

Sheep and Lambs—Receipts have fallen off largely, the average for the past five weeks being 11,143 per week. They have advanced materially in price, good fat sheep selling at 4c.@4½c. per lb. live weight—a few "Christmas Sheep," of over 200 lbs. live weight, sold at $15 to $20 each. Stock is scarce just now.

Live Hogs—Immense Receipts.—The receipts have been enormous—far exceeding anything before known in this market. The total receipts for 5 weeks have been **170,614**, or 34,123 per week, while the receipts for all of last year were only 319,620, or an average of 6,147 per week. The greatest receipts for any one week in 1860 were 15,180; the receipts for *this* week were 38,200. This influx to the market, is due to the embargo of the Mississippi, a usual outlet to Western pork, and to the disturbed condition of the slaughtering towns along the Ohio and upper Mississippi.—The slaughter houses of this City were, for a time, unprepared for receiving so many, but they are now able to dispose of all that come. Prices have continued to rule low, but are improving a little now. The selling rates this week are for corn-fed hogs 3½c.@3¾c. per lb. live weight. Still-fed 3c.

The Weather, has continued remarkably mild for a Winter month, with very little rain and only two light snows which disappeared with a few hours of sunshine ——Our Daily Notes, condensed, read: *November* 19 to 22, clear and warm—23, rainy day—24, clear and cool, 1 inch snow fell at night, but soon melted—25 to 28 clear, cool—29, rainy day—30, rain A. M., clear P. M.—*December* 1, clear A. M., cloudy P. M.—2, cloudy—3, clear cool—4, coldest day of season mercury 18°, first hard freezing—5, clear, fine—6, cloudy—7 to 10, foggy mornings, clear and warm, Indian Summer days—11, rain A. M., clear, cool P. M.—12, 13, cool—14 to 17, clear and warm—18, cloudy, mild—19, 20, clear, fine.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.)—*r* indicates rain—*s*, snow.]

OCTOBER.

1......52°	8......62r	15......52	22......48	29...... 40
2......54	9......49	16......52	23......54r	30......45r
3......63	10......52r	17......59	24......43	31...... 45
4......56	11......61r	18...... 65r	25......34	——
5......64r	12......61r	19......64r	26...... 49r	Average53°
6......67	13......52	20......56	27......50	
7......70r	14......47	21......45	28...... 38	

NOVEMBER.

1......44°	7......44	13......36r	19......34	25......33s
2......50r	8......40	14......44	20......31	26......31
3......55	9......49r	15......35s	21...... 33	27......33r
4...... 44	10......38	16......35	22...... 33	28......36r
5......42r	11......48r	17......39	23...... 41r	29...... 41r
6......45r	12......43	18...... .36	24......34	30...... 36r

Average..39°

DECEMBER.

1......34	4......22	7......41	10......44	13......28
2......35	5......30	8......39	11......46r	14......34
3......24	6......39	9......46	12...... 24	15......38

PREMIUM LIST,

For 1862---Vol. XXI.

Or Pay to Voluntary Agents who will attend to collecting names of new and old subscribers to the Agriculturist, and forwarding them to the Office.

(See List on next page.)

Experience has proved that it is a benefit to the subscribers themselves, as well as to the Publisher, to have an *Agent* at every Post Office, to attend to collecting the names and subscriptions of old subscribers, and to present the advantages of the paper to those not yet acquainted with it. But to employ and commission a Special Agent in every neighborhood throughout the country, is out of the question. We therefore offer certain good articles, the value proportioned to the number of names sent in, and leave them open to every person disposed to attend to the business, in the locality where he or she may be known to be reliable. By giving the articles offered we can make the pay *much larger* than if in money, because we have facilities for getting these articles at a low rate. Besides, the advertising thus given to the manufacturers, induces them to bear a considerable portion of the expense on the articles we need for premiums.

☞In selecting articles for premiums, we have aimed to get such as are *useful*, and as have been most frequently called for by our readers. ☞We wish it distinctly understood *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ We offer nothing *for competition.* Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing. Every one aiming for a premium, knows just what he or she is working for; and also that if a higher premium is not secured, a lower one can be taken.

☞Only one premium can be paid on the same subscriber

☞ *We make no distinction between new and old subscribers,* but it is expected that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞ Every person collecting names for premiums, should send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; but if designed for premiums, two copies of each list of names should be sent—one of them marked at the top "For Premiums," and also with the name of the sender.

☞ The premiums are offered for subscribers for Volume XXI (1862), *whenever received.* Canvassers will have time

for completing their lists, but the premium will be paid as soon as any club is made up—if duplicate lists are sent.

☞ Any person who has commenced sending in names at 80c. and finally fails to get the higher number of names, can fall back upon the smaller number, by remitting the 20 cents extra on each of the smaller number of names required.

☞ Clubs need not be all confined to one Post Office.

☞ No premium is sent till *specifically asked for*, as we have many friends who send in large lists but who will take no premium, and we are not certain that premiums are desired, unless the fact be mentioned particularly.

Table of Premiums for 1864.

Names of Premium Articles.	Premium. Price of each.	Names at 80 cts. each.	Names at 85 cts. each.
2—Clothes Wringer, No. 2	$7 50	18	37
3—Clothes Wringer, No. 3	$10 00	23	45
4—Sewing Machine, (Wheeler & Wilson)	$45 00	90	48
5—Sewing Machine, (Wilcox & Gibbs)	$55 00	69	130
6—Aneroid Barometer	$7 50	19	98
7—Hydropult	$12 00	30	44
8—Five Octave Melodeon (best)	$75 00	125	257
9—Five Octave Melodeon (best)	$60 00	104	183
10—Four Octave Melodeon (best)	$45 00	90	130
11—New Cyclopedia, 16 volumes	$48 00	90	140
12—Worcester's *Unabridged* Dictionary	$7 50	17	40
13—Five back Volumes Agriculturist, *p.p.*	$3 00	10	30
14—Four do do do do	$4 48	13	26
15—Three do do do do	$3 60	10	30
16—Two do do do do	$2 24	15	
17—One do do do do	$1 12	10	
18—Windsor & Newton's Paints	$2 50	30	
19—Woolson & Hodgkinson's Paints	$1 50	15	
20—Hand Corn Sheller (best)	$6 50	21	40
21—Straw and Hay Cutter (best)	$8 00	24	48
22—Best Subsoil Plow (2-horse)	$8 00	24	48
23—Various Books—*See terms below*			
24—Boy's Chest of Tools	$8 00	18	36
25—Youth's Chest of Tools	$13 00	38	60
26—Gentleman's Chest of Tools	$20 00	60	80

DESCRIPTION OF THE PREMIUMS,—SEE REMARKS ABOVE.

Premiums. 2, 3.—Wringing Machine.

We place this first, for it is nearly new, and one of the most useful articles for every family. We had one of the first made, and have used it over a year with the highest satisfaction. It completely does away with the hard straining work required to wring out garments by hand. It does not twist and break the fibers of the clothes, but simply presses them between two elastic India rubber rollers, which are moved by a crank, and whether large or small pieces, they come out dryer than when wrung by hand The saving to garments would soon pay the cost of the implement, to say nothing of the saving of WOMAN'S labor. The machine is set upon the side of any tub; the garments drop out into a basket. A child can quickly wring out a tub full of clothes—No. 2, costing $7.50, is just the thing for common family use. This we present to any one sending us **18** subscribers for the *Agriculturist*, at $1 each, (or **37** at the lowest club price of 80 cents each).—No. 3, costing $10, is suited to larger families and Hotels. We will present it for **23** subscribers at $1 each, (or **48** at 80 cts. each.)

Premium No. 4—Sewing Machine.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person sending them to *Wheeler & Wilson's* best **$45 Sewing Machine**, (including **Hemmer**), new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly *four years'* use in our own family, in connection with other machines. We want no better.—The prolongation of life, the saving of health and strength to our females, and the better physical vigor thus secured to the next generation, render the Sewing Machine one of the most desirable additions to the household.—Premiums 4 and 5 will be selected new at the manufactories, be well tested, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using go with each machine.

Premium No. 5—Sewing Machine.

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Premium No. 6—Barometer.

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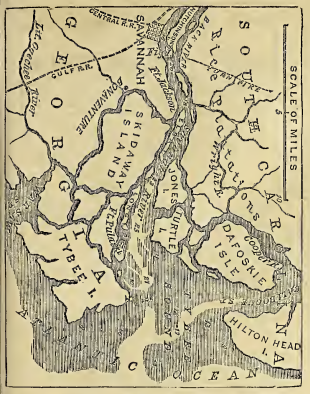
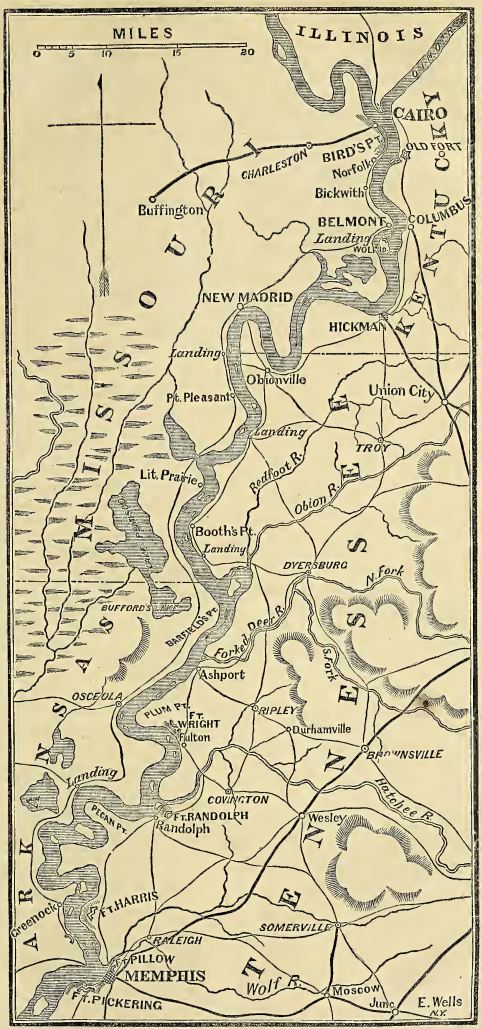


THE MAPS.—In the November *Agriculturist*, we gave 3 re maps, embracing Missouri, Kentucky, part of Tennessee, l the Potomac River from Harper's Ferry to its mouth, with adjacent territory. The extraordinary call for extra copies that number, from subscribers who purchased them for their ends, leads us to conclude that the accompanying maps of nts of present interest will be very acceptable.—**No. 1,** shows location of SHIP ISLAND, which has just been occupied the Union troops as a base of operations in the South West. w-Orleans and its surroundings, and the mouths of the Missis- pi, etc., are also laid down. The small figures on this Map in- ate the depth of water.—**No. 2,** shows another interesting ality, including a part of Hilton Head Island, which exteuds rth to Port Royal and contains Fort Walker, the head quar- s of Gen. Sherman. Tybee Island, Fort Pulaski, Savannah, ., are also seen. **No. 3,** is a locality towards which general ention is directed, and we shall doubtless soon hear of mil- ry operations in that vicinity.—**No. 4,** shows a portion of the ssissippi River, which is just now *the* great center of interest, view of the extensive military preparations, apparently for a scent upon Columbus, by the Union forces, gunboats, etc., w collecting at Cairo, St. Louis, and in various parts of Ken- cky. These Maps, in connection with those given in Novem-



No. 4.—Mississippi River from Cairo to Memphis.

ber, will enable our readers to follow the contending armies in their more immediate operations. Other points of interest will doubtless soon be developed. ☞ We can not longer supply the November number free to new subscribers. Copies can be had at the regular rates (10 cents each).

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See December number for description.

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As there have been many inquiries as to the right I have to use the invention, patented to A. W. Morse, of an adjustable Lever, by which the finger bar and knives of a grass harvester are elevated or depressed, I hereby give notice that I have settled in full with said Morse for the use of said invention on *all machines of my* make, and all who have them, are relieved from any liability to said Morse, or his agents, and I have also leased the right to use in future the said improvements, as the subjoined certificate will show.

R. L. HOWARD, Manufacturer, Buffalo, N. Y.

I, Albert W. Morse, the Patentee of the Lifter arrangement for Grass Harvester, do certify, that Rufus L. Howard, of Buffalo, has settled with me for the past, and taken a license for the future, as stated in his card above.

Dec. 15th, 1861. ALBERT W. MORSE.

Ingersoll's Cheap Hand Power Presses for Baling
HAY, STRAW, COTTON, WOOL, RAGS, MOSS, BROOM CORN, HAIR, HIDES, &c.

These Presses are made for any size or weight of bale required, and delivered on ship board in New-York. Farmers and others wanting such machines are invited to write for Catalogue containing full information.

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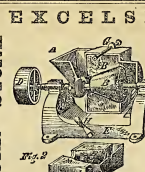

Fig. 2

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These machines took TEN FIRST PREMIUMS at WESTERN STATE FAIRS last year, and are justly considered superior to all others.

The grinding surfaces of this Mill are BURR STONE, of coarse, fine, or medium cut, as may be required, for fine flour or meal, and the coarsest feed may be ground with the same Mill. Any person can operate and keep the mill in perfect grinding order without expense, and it

WILL LAST A LIFE TIME.

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A Slight Cold, Cough, Hoarseness, or Sore Throat, which might be checked with simple remedy, if neglected, often terminates seriously. Few are aware of the importance of stopping a Cough or Slight Cold in its first stage; that which in the beginning would yield to a mild remedy, if not attended to, soon attacks the lungs.

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SUPER-PHOSPHATE OF LIME,

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A. LISTER & BROTHER, TARRYTOWN, N.Y.
(For results of the present season see *American Agriculturist*, for August, 1861, page 252.)

We guarantee every ton of our manufactures to be of uniform quality, and invite trials or chemical analysis.

We also manufacture from RAW, (OR UNBURNED), BONES, the fine, medium, and coarse ground **Bone Manure**, for lasting as well as immediate effect upon all kinds of farm crops. The coarse ground is particularly valuable for *Fruit Trees* and *Grape Vines*, which require a constant and lasting source of nourishment.

For sale in large and small quantities by
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and their agent, F. LANGMAN, 159 Water-st., New York.

100,000 BARRELS
OF THE
LODI MANUFACTURING COMPANY'S
POUDRETTE,
FOR SALE BY
JAMES T. FOSTER,
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The large facilities which they enjoy by exclusive contract for all the night soil of the City of New-York, and large capital invested in their extensive works, enable them to manufacture an article which is superior to any other fertilizer in market, taking *cost and yield* into consideration. It will be sold at the usual price of $2 per barrel for seven barrels or over, delivered free in New-York City.

Please take notice that the office and sale of this Company's Poudrette is changed from Messrs. Griffing, Brother & Co., No. 60 Cortlandt-st., to No. 66 CORTLANDT-ST.

Other brands of what purports to be Poudrette are in market, put up in barrels to resemble this. Beware of frauds—buy that only which has the brand of the Lodi Manufacturing Co. Any other article is comparatively worthless.

We call the attention to the following experiences of practical farmers, in different sections of the country:

NORTH PEMBROKE, Mass., Oct. 7, 1861.

James R. Dey, Esq., President of the Lodi Manufacturing Co.:

Dear Sir—The early autumnal frosts for several years past have seriously injured our corn crop, and rendered it necessary for farmers in this section to seek some fertilizer to give their crops an early start, in order to bring them to maturity in season to avoid that calamity. Having experimented with Guano, Superphosphate of Lime, etc., with indifferent success, in the Spring of 1860 I purchased four barrels of the Lodi Manufacturing Co.'s Poudrette, which I applied principally to my corn crop, with the most satisfactory results. This was the first Poudrette ever introduced into this vicinity. Last Spring I purchased seven more barrels of Boston about thirty barrels, the most of which I sold to my neighbors, who had witnessed the effect of my last year's trial, which, so far as has been heard from, has given entire satisfaction, and will tend to test the efficacy of your Poudrette, this season I ploughed about two acres of light sandy soil, which had laid in grass about six years, (the last crop of grass being very light.) This I planted with corn and potatoes, applying about one tour and a half barrels of Poudrette, with no other manure, except a handful or ashes to each hill at the first hoeing, and the present appearances we shall have a better crop than on a field of like soil where we applied twenty-five loads of manure to the acre. Its effects on garden vegetables are equally apparent. I am, very respectfully yours,
HORACE COLEMORE.

MERRILL, Me., Oct. 11, 1861.

Lodi Manufacturing Co.:

Sirs—I bought of your agents, Cross & Newell, two barrels of your Poudrette, and in the first part, I got about a load and solid the other barrel. But the one that I used I tried the principal part on potatoes. I used about half a pint to the hill, and the yield was equal to those planted on manure at the rate of twenty loads to the acre. My neighbor, who bought the other barrel, says if he had bought five barrels more, he would have saved the price of twenty barrels.
Yours, &c., Y. R. PAUL.

WALDO, Me., Oct. 12, 1861.

To the Lodi Manufacturing Co.:

Gentlemen—Last Spring I bought of Cross and Newell one barrel of your Poudrette as an experiment, but with very little faith in its utility. I put it on six rows of corn in different parts of the field, after ploughing with about 60 lbs. manure, in the usual way—at the second time hoeing. Where I put the Poudrette the corn was twice as large as the rest of the field, and this now is one-third heavier, and has ripened about eight days earlier. I think it the very thing we want for raising corn in this country, and shall use it more extensively another year.
Yours, &c., WELLINGTON SHOREY.

SMYRNA, Del., Oct. 1, 1861.

Gentlemen—I had heard of the Poudrette manufactured by the Lodi Manufacturing Co., and thought I would try a small quantity on a lot of land intended for corn, and as I could not get it nearer than Philadelphia, I went and bought of the agent twenty barrels, and applied two barrels to the acre, dropped the corn and put a handful of Poudrette in each hill. I left out a part of two rows, and put no Poudrette, to ascertain if there was any value in it, and noticed those two rows during the season, and where the Poudrette was used, the corn was decidedly the best, and I have no hesitancy in saying it is a good manure for corn. I am certain I made from one-third to one-half more by using it.
Yours, respectfully, JOHN G. BLACK.

CHESTER, Pa., Sept. 15, 1861.

To the Lodi Manufacturing Co.:

Gentlemen—I purchased the season of Messrs. Baker & Co., eleven barrels of Poudrette and one bag of Phuine, which I put on my corn. I marked the place where I put the Phuine, which, when started, seemed ahead, but now the corn where the Poudrette was put is much the best. Last year I used Allen & Needle's new Fertilizer, which did no good at all, as the corn done better without the manure. I think the Poudrette made by your Company the cheapest manure in use.
Yours, &c.,
A. R. PERKINS.

The Company's pamphlet, containing directions for its use, with other valuable information and the experience of over one hundred farmers, will be sent free to any one applying for the same. Address,

JAMES T. FOSTER,
Care of Lodi Manufacturing Company,
66 Cortlandt-st., N. Y

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Publisher's Notices.

Don't Send any more Money by Express.

Owing to a combination among the express companies, and the heavy charges made for bringing money (averaging about 10 per cent on what we have lately received in this way) we must request our friends to hereafter choose some other mode of remitting. The mails are safe if a letter be securely closed and plainly directed. The Post Master General's last report showed that nearly ninety nine out of a hundred of the money letters received at the Dead Letter Office, were astray for want of carefulness on the part of the writers. In the past year we have received as many as a hundred letters containing money, *which had never been sealed at all*, and yet they came through safely. Many other letters have been defective otherwise, owing to the oversight of the writers.

The *best* way to remit money (if $10 and over) is in the form of drafts on a New-York Bank, payable to the order of the publisher. They can now be obtained cheaply at most larger towns, or wherever there is a Bank. Such remittances are absolutely safe, if drawn by a responsible Bank, or Banker. The new Demand Treasury Notes of $5, and $10 or upwards are convenient for remitting. The general currency of the country, however, is now on so sound a basis that bank bills in most of the States are within one or two per cent of par here. Missouri Banks are just now an exception, being 20 per cent discount.

Good Things Easily Obtained.

We again remind our readers that it will be an easy matter for many persons to each obtain one or more good articles offered in our premium list (page 27); they are all desirable. It would benefit us, and be a convenience to other subscribers, if some one at every Post Office would gather up a large number of names and forward. The more subscribers there are in any place the greater will be the improvements made in that locality. Every man set to *thinking* by the hints and suggestions given in this or other journals, will be also set to improving, and his experience and example will be a benefit to others within the circle of his influence.——Will the reader please look over the premium list, and commence a club at once, if some one else is not already successfully engaged in such an enterprise? More than two thousand persons received one or more of our premium articles last year. Over 800 secured the large dictionaries alone, while great numbers obtained the splendid Cyclopedia, Sewing Machines, Melodeons, etc., and we have yet to hear of one who does not feel paid for the effort required.

Flourishing.

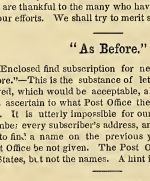
The numerous friends of the *Agriculturist* will doubtless be glad to learn that, despite the war and hard times, the paper is receiving quite as many subscribers as in any former year. We have tried to *deserve* this success, and are thankful to the many who have kindly appreciated our efforts. We shall try to merit still greater favors.

"As Before."

"Enclosed find subscription for next year. Send as before."—This is the substance of letters frequently received, which would be acceptable, always, if we could only ascertain to what Post Office the "as before" refers. It is utterly impossible for our entry clerks to remember every subscriber's address, and next to impossible to find a name on the previous year's book, if the Post Office be not given. The Post Offices are indexed by States, but not the names. A hint is sufficient.

It will Pay.

Our arrangements are such for the present year, that we *know* the *Agriculturist* will be worth vastly more than its subscription price, to every one who reads it. This number, as *full* as it is, is only a beginning. The reader, of course, knows all about this, but there are many who do not. A word to them from a mutual friend (yourself) might be for their benefit——and ours, too.



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Almanac for 1862.

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FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

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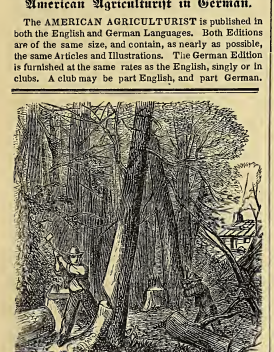


February.

"Where now the vital energy that moved,
While Summer was, the pure and subtle lymph
Through the imperceptible meandering veins
Of leaf and flower? It sleeps; and the icy touch
Of unprolific Winter has impressed
A cold stagnation on the intestine tide.
But let the months go round, a few short months,
And all shall be restored. These naked shoots,
Barren as lances, among which the wind
Makes wintry music, sighing as it goes,
Shall put their graceful foliage on again,
And, more aspiring, and with ampler spread,
Shall boast new charms, and more than they have lost."

The "cold stagnation" of which Cowper thus speaks, is every where manifest. All the plants are taking their winter sleep, from the tallest trees in the forest to the humblest mosses and lichens that flourish in their shade. For nearly half the year they are as torpid as if they were dead. If there is any movement of the vital forces within, it is carefully concealed. The leaves have fallen from the larger trees and shrubs, forming a warm covering for the delicate plants that flourish only in the protection of the forest. Then the snow falls and makes a still further protection, so that the ground in the far north is often frozen no more than in our own latitude; if the snow comes early, it may not be frozen at all in the deep woods, even in the coldest seasons. If we should remove the snow we would find the winter-green, and prince's pine, the adder's tongue with its purple hues, and its kindred plant the creeping goodyera with its white veined and netted leaves, and the twinberry with its bright scarlet hues, and a great variety of other humble plants as fresh as in summer. Most men are strangers to the world of beauty that lives and has its being under forest leaves, or but just above them. It is one of the advantages of the passion for Wardian cases, which has recently come over our cities and villages that it is bringing to light these lowly dwellers of the retired woods, and secluded swamps. A man may live a life time in the country, and be familiar with the woods without suspecting that there is more than one kind of moss, or of ferns, or of lichens. The mosses have a certain family likeness, but a very slight examination shows as great a variety among them, as among oaks. On almost any dozen acres of our moist woodlands, especially if they are threaded by small rocky streams you may find at least a dozen varieties of the mosses, and as many lichens, with several kinds of ferns. All but the ferns are quite accessible in every mild spell in the winter when the snow and ice melt. Nothing can exceed the delicacy and beauty of some of these mosses. Some are soft and fine as velvet, others of feathery shape, and others still, resemble chased silver. Sometimes the lichens and mosses are found intermingled in the same mass, the lichens sprouting out of the velvet sod like stag horns. The ferns are only to be found by the fallen leaves and stalks of the last season's growth. Nothing can be more charming for the winter parlor than one of these Wardian cases tastefully arranged. Hyacinths and crocuses flourish under the glass, but are not essential to its beauty. Almost all plants like those we have mentioned, which grow in the shade, will do well in the Wardian case.

While the plants are taking their winter rest we may stop to discuss the bearing of labor upon our prosperity. Adam Smith has well said, "Labor was the first price, the original purchase money, that was paid for all things. It was not by gold, or by silver, but by labor that all the wealth of the world was purchased." The land now divided into farms and owned in fee simple was almost worthless to the aborigines, who drew from it a scanty, precarious subsistence, by a very rude husbandry. They laid up few stores of grain, and were always in peril of starvation. It took thousands of acres to support a single individual. This land has become valuable by the *labor* that has been bestowed upon it. Our government assumes that its lands are without value, and it surveys them, and gives a title deed with the guarrantee of protection for one dollar and a quarter an acre, assuming that will be the cost of its survey and protection. The land grows valuable to us, just as we bestow skill and labor upon it, up to a certain limit

The wild land is made valuable to the purchaser, when he puts a fence around it. He may then turn in his cattle and exclude those of his neighbor. If he fells the forest, that labor increases the value of the land by enabling it to yield more grass and hay. He can keep more stock and make more butter and cheese for market. If he plow, after the forest stumps are rotted away, he adds another value to the land by making it yield the roots and grains. He can keep still more stock and get a still larger income from his land. If he lay out still more labor and plow an inch or two deeper, he gets still larger crops and puts a higher value upon the land. We get a very fair crop in some parts of the country if the seed is only dropped and covered upon the plowed land. It is improved with once cultivating and hoeing. But some find that a crop of corn pays abundantly for four times cultivating. Not a weed is left to draw upon the strength of the soil, or to scatter its seed and make work for another season. The more stirring of the soil, they say, the more corn. The more labor the more profit.

Then again, if we add to the plowing and tillage the labor of making and applying manure to the land it is found to pay better still. Just how much we may profitably spend in this way no skillful farmer would find it easy to say; it is much beyond any thing now done. Some acres produce twenty bushels of corn, others eighty. The principal difference is in the labor and manure which is only labor in another form. The fœces of twenty cows for a year occupy but a small space and will be mainly wasted without care. With labor enough they will make two hundred cords of manure. Apply fifty cords of manure to an acre and it yields astonishing crops, so that all the measures and scales are suspected of lying by farmers of the old school, who are afraid of hiring too much labor. The garden has more labor and manure than the field, and so produces vastly more per acre.

It would not do to lay down as a maxim without qualification, "the more labor the more profit," there must be a limit; but it is far beyond our present practice. It is found to be far more *profitable* to raise eighty bushels of corn to the acre than forty, or any less number, in the sea-board States where corn is high. One man works two hundred acres with a single hired man and boy, and just gets a living. Another, with no more capital, works the same sized farm with eight men, the year round, with teams to match, and gets rich. He pays the men from the products of their own labor, and saves a profit to himself. His practice furnishes the needed hints as to the direction in which labor should be employed. In our arrangements for the coming season, we need a more generous faith in the capacities of the soil to reward labor.

Calendar of Operations for Feb., 1862.

[A glance over a table like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 38° 40' and 45°, but will be equally applicable further North and South, by allowing for latitude. —The calendar will, of course, be much more full during the season of active field and garden work.]

Farm.

This month and the following are the most critical for all kinds of domestic animals, and the stock farmer has enough to occupy his time even though winter reigns in full rigor through the whole of February. The long evenings invite to sociability and neighborly intercourse, and the approaching summer campaign affords a topic for discussion among farmers when they meet. February is the month of all others for Farmers' Clubs to be most useful and attractive. There are grafts and seeds to exchange, and we are beginning the year with the business of 1861 well settled, and out of mind.

Buildings—Keep water out of foundation walls, and thus protect them against the effects of frost, and be always guarded against high winds and sudden changes.

Cattle need a change of diet; manage to let them have it. Look to their comfort most carefully. Cows coming in must be dried off certainly one or two weeks before the new milk springs: feed them generously, not with heating food; roots should form part of their diet. Working cattle ought to have a respite from hard work now if possible, so as to be ready for the labors of the spring; let them lay on a little fat, and keep the skins of all neat stock healthy by currying. Look out for lice, especially on young stock. Do not hold on to beef cattle after they can be sold at a fair price.

Cellars—Look well to the vegetables and remove all decaying ones, "sprouting" the potatoes if necessary. Do not feed decayed cabbages or turnips to milch cows, it will surely flavor the milk.

Corn land of the last season may be cleared of the stubble or stalks while the ground is frozen; at least break off the stubble close to the ground to facilitate plowing.

Drains and ditches—Clear surface drains of ice and other obstructions. See that when the snow thaws, the overflow from drains or ditches does not wash the soil away; and prevent surface water working holes down to the tiles in newly laid tile drains. Protect the outlets from rats and mice.

Fencing—Follow advice given last month and plan for dispensing with as much as you can; have as little as possible, but have it all good.

Fields of grain and grass are invariably injured by cattle and sheep ranging over them in winter, and the temptation to allow it is strongest during February.

Grain—See Calendar for January.

Hired Men—Farm hands should be engaged early. The best find places soonest.

Horses, and mule teams, must be kept well shod and sharp. If a horse breaks his leg you can't "help" him. Breeding mares should not leave the stable in very icy weather. Devote some time daily to colts of a suitable age for breaking.

Hogs should be kept hard at work upon the manure in barn cellars if possible, otherwise secure them warm quarters and feed them so as to keep them growing and healthy. Do not let the troughs fill up with frozen swill. Breeding sows should be kept separate and have warm retired nests, where they can be easily got at. Feed raw sliced roots occasionally; it prevents constipation and the tendency to devour their young.

Ice—Quick, or it will be gone; it is seldom worth much for storing after the 10th of February.

Manures—Fine composts, with soil, head lands, or muck, well incorporated, may be hauled to the field while the ground is frozen. See that all sorts are well mixed and composted as it accumulates. Keep frost out of the manure heaps if practicable.

Maple Sugar—Prepare to make all possible, and be ready for the first flow of sap—this is the sweetest. See article on page 42.

Potatoes for Seed—Keep where they will not sprout; but do not rub the sprouts off.

Poultry—Whitewash the poultry house and grease the roosts. Change the old nests, and encourage laying by feeding beef scraps or bits of meat from the table.

Sheep must not be allowed to fall off in condition.—They will relish hemlock branches and they are good food for them in limited quantities. Feed breeding ewes a quart of sliced raw potatoes with a very little meal upon them, daily. Never let sheep lack water or salt—and above all, feed regularly.

Tools—Provide a good supply for spring work, while you have means to buy and to select them at leisure.

Orchard and Nursery.

Little can be done in this department until the ground is in order for transplanting. The earlier that can be done, the better. Thousands of trees are yearly destroyed by too early swelling of the buds, which are killed by succeeding frosts. Small trees (as peach trees and apricots) may be protected by pine and hemlock boughs tied in among their branches and by stamping snow down about their roots—applicable only on a small scale.

If trees are frozen after being taken from the ground, bury them tops and all; they will sustain less injury if thawed gradually. Make things ready for spring work.

Cions will soon be needed. Procure only choicest kinds, and in mild days when not frozen. Label each sort distinctly, and keep in sand in the cellar.

Insects of some kinds are more readily destroyed now than later in the season. Scrape trunks and main limbs of trees infested with bark-lice, and scrub with lye.

Manure—Draw out and spread under the trees, at least as far as the branches extend in orchards or level grounds.

Orchards do not need manure every year. Apply unleached ashes or fresh slacked lime when the frost is leaving the soil, not before. Pare trees love ashes.

Pruning—It is best to abstain even from *knife* pruning as we approach the time for sap to start. Many prune now to the great injury of the orchards. Dwarf pears, however, may be pruned without danger.

Snow—Be always watchful in case of snow and ice storms, and support the branches in danger of injury before it is quite thrown down.

Stakes, labels, tallies, packing bags, mats, etc.—Be sure to have prepared, before hand, all that you will need for spring use during the season of nursery planting or sales.

Varieties to plant or graft—Give up old fogy notions, and study well and adopt the best varieties of all kinds of fruit and ornamental trees. A nurseryman who gets behind hand stays behind hand in this respect.

Kitchen and Fruit Garden.

Every thing that may in the least forward spring work in the kitchen or market garden, should be done, and as the busy time approaches many things will occur to the mind which should be made a note of. No novice should attempt very early forcing vegetables for market, but to succeed well, he should grow into the practice after a year or two, beginning a little earlier each year.

Cold Frames—Admit air during mild weather, and watch against dampness and decay. Guard against sudden freezing. Spread over them mats or straw, when unprotected by a covering of snow.

Cuttings of Currants, Gooseberries, etc., may be made whenever the wood is not frozen, but better in the Fall.

Fences—Repair old, and make all hen proof. Provide proper fastenings for gates.

Grape Vines—Prune at once, if not done in the Fall.

Manure—A garden can hardly have too much; it should be finely divided and intimately mixed with the soil. For fruit trees, leaves, or sawdust saturated with urine is an excellent application. For the garden rich composts of all kinds, particularly night soil, hen dung, etc., with fine yard manure and muck, are excellent.

Prune Currants and Gooseberries and clean out the old stalks from Raspberries if neglected until now; cuttings of the two former will grow if kept till spring.

Rhubarb in open ground can be hastened by covering with horse manure now, later with a headless barrel.

Seeds—Examine the list for free distribution from this office, printed on a subsequent page, and select new or favorite kinds. Procure and study catalogues of reliable seedsmen whose advertisements appear in the appropriate department. Test samples before purchasing largely. They are best proved by mixing with a little sandy soil and keeping them in very small pots under a glass.

Stakes—Prepare a good supply and soak them in a weak solution of blue vitriol in water, etc.

Tools—There are always new and improved kinds claiming attention. Put the old stock in good order.

Flower Garden and Lawn.

Do not think there is nothing to do in the flower garden; on the lawn there is in fact little, save to keep an eye to the shrubbery and evergreens, and see that high winds and heavy snow and ice storms do no harm, but in the garden, look to the

Borders—Winds will tear away the protection about many half hardy plants, and it must be replaced. The fowls, if they have the range of the place as usual, will scratch off the mulch over the crocus, hyacinth and tulip beds, perhaps exposing the bulbs even. It does no special harm if the mulch be at once thrown back again.

Christmas greens, when taken down are very handy to give a little additional protection wherever needed.

Cold Frames—Give treatment elsewhere advised.

Cuttings may be taken; prune and trim hardy shrubs.

Frost most commonly does its damage to vegetation in February. The best shield is protection against the morning and midday sun on warm spring like days.

Hot-Beds may be made for seed of early flowers, to hasten their blooming period, and to start cuttings. Many plants will strike in a hot-bed with a moderate heat, which could hardly be made to grow in the open ground.

Roses—Begin pruning in mild weather.

Transplanting and shifting roots of perennials, etc., should be done just as soon as the frost is out of the ground. The earlier the better.

Trellises and Arbors—Provide for vines and trailing plants. Repair all needing it and paint while the ground is covered with snow and no dust is flying.

Green-House.

The directions of last month suffice for this in the main. The great art in managing a green-house is to keep the temperature low but never too low, and to keep down insects. Bring plants beginning to grow or showing for bloom close to the light.

Cuttings of many of the woody plants may now be made and potted. They strike better if taken to hot-house.

Prune into shape any plants needing it, before a new growth begins or flower buds form, and remove all decaying branches, dead leaves, weeds, and moss, keeping every thing neat and clean.

Repotting will claim a full share of the manager's time this month, if the collection is large. Many of the plants may now be carried to the forcing apartments to hasten the blooming period.

Roses—Attend to grafted stock, or graft if not done.

Water—Increase the amount as the plants push into growth, but avoid an excess.

Hot-House and Conservatory.

In the conservatory follow directions given last month. In the hot-house maintain 70° to 80° of heat. If snow falls, the roof should be cleared to admit the light which the rapidly growing plants now require. Air must be given the plants frequently, but much care will be needed to prevent chilling drafts striking directly upon the plants. Maintain a constantly moist air by sprinkling freely.

Annuals—Seeds of many of the out-door annuals may now be sown in pots. They will form good sized plants for decorating the border early in the season.

Azaleas, now in bloom, should be watered freely. Avoid syringing after they are in full bloom.

Bedding Plants—Layer or insert cuttings of Petunias, Pelargoniums, Verbenas, Dianthus, Candytuft, Pansies, Dicentras, Daisies, etc., for early planting in open borders.

Bulbs—The early forcings should now be in bloom, and others in a good degree of forwardness. Bring a fresh collection from the green-house, every two weeks.

Camellias—Look out for red spider; if affected, wash each leaf with a sponge and soft water, and syringe with water containing flour of sulphur.

Insects—Fumigate with tobacco, destroy any which have established themselves, and wash with soap suds.

Repotting—Many rapid growing plants require pots of a larger size. Keep potting soil at all times in readiness.

Grapery and Orchard-House.

Cold graperies and orchard houses will need no more attention than last month, until the weather becomes decidedly warm and spring like, which seldom occurs north of latitude 41°, before March. The vines should then be lifted, and tied to the rafters, and the borders watered with liquid manure. In houses to be brought forward by moderate heat, do the same and maintain a temperature not much above 50°, in the day and ten degrees lower at night. Water sparingly with liquid manure. When growth begins vigorously, follow up with careful pinching-in, and occasional sprinkling. Keep a moist atmosphere particularly on warm days by sprinkling the floors and walls. Compare directions given last month.

Apiary in February.

Prepared by M. Quinby—by request.

There is yet some danger that steady cold weather will close the air passages with frost, dead bees, etc. A day or two of severe weather will not effect much, but when protracted to a week or two, the bees will need attention.

In times of mild weather, sweep out clean under the bees. If the stands of any hives are to be changed, it should be done before the bees fly out and mark their locality. Should they be moved but a short distance, the importance of doing it now, is much more. Have a separate stand for each hive, instead of a long bench for all. You can then give some five or six feet space to each, without vacant room on the plank. If a bee-house is to be used the coming season, it should be ready now to put in the hives. Bee houses can be very ornamental, yet they are not always the most profitable places, in which to keep bees. A bee-house would do very well, even with the hives crowded together as they usually are, if all the new colonies introduced could be provided with a fertile queen, and no swarming allowed, as then there would be but little danger of her issuing to meet with them, and getting destroyed by entering the wrong hive on her return. This process will soon become familiar to those who introduce the Italian bee into their apiaries.

All who intend to Italianize their bees the coming season, should make their preparations now, and not wait until attention to spring work leaves no time to think how it should be done. Any of the movable comb hives are so much superior to the common box, for changing bees from the native to the Italian, that I can not imagine how a person can feel satisfied to be without one. The bees, comb, and honey, can be transferred from the one to the movable frame hive, early in Spring. To rear the queens you must enclose a few bees with a small piece of comb containing young larvæ or eggs. A suitable piece of comb can not be cut from a large sheet without destroying much of the brood, and the few bees generally taken for this purpose, need something much smaller than the ordinary hive. To have the operation work smoothly, you want a special arrangement, something like the following: Get the size of one of the large frames inside; make a number of small frames of just that fit. Have them as near four inches square as the shape and size of the large one will admit. If operations are to begin early, fit a piece of clean worker comb into each small frame. Fasten them into the large frame, with wire, or strips of tin, or something easily removed, as it will often be desirable to take out a large frame and remove a small one without disturbing the bees that happen to be attached. This frame thus prepared is introduced into a colony where there is an Italian queen, a few days before brood is wanted. A miniature hive that will hold three or more of these small frames will be needed. It should be so arranged that it may be easily examined at all times. These little colonies are not so irritable as larger ones, and afford a much better opportunity of studying the most interesting points of natural history. If these boxes are to be painted, it should be some light color, and should be put on immediately, that the odor of new paint may in some measure pass off before using. Particular directions for rearing queens and introducing them, will be given at the proper season.

Exhibition Tables at the Office of the American Agriculturist.

The following have been exhibited since last report:

VEGETABLES.—Chinese Potatoes, 2 years old and fine, grown in sandy loam, by Mr. Downing, Newburg, N. Y. ....Sample of Sorghum, J. N. Carr, Philo, Champaign Co., Ill....Variegated Corn, Mr. Wilson, N. Y.....Collection of Corn, W. S. Carpenter, Rye, N. Y.....Tripsicla Corn, Mr. Wilson.....Collection of Corn, J. M. Thorburn & Co., N. Y.....Improved King Philip Corn, from seed from the *American Agriculturist*, fine, C. E. Wheeler, Bergen, N. J.....Hubbard Squash, weight 17½ lbs., the finest specimen we have seen, B. Williams, West Bloomfield, N. J.....Specimen of Corn, from the same.

FRUITS.—Seedling Winter Pears, very fine, A. M. Halsted, Rye, N. Y.....Collection of Apples, E. Williams, West Bloomfield, N. J.....Newtown Pippin Apples, of 1860, kept remarkably well, somewhat shriveled in the flavor, Robert Benner, Esq., Astoria.....Cider from Iron Apples, (so termed from their hardness), delicious, G. M. Usher, Staten Island, N. Y. ..Collection of Apples, G. M. Usher, as above.

MISCELLANEOUS.—Mole Trap, Micajah T. Johnson, Short Creek, Harrison Co., O.....Collection of Brazilian seeds, Mr. Colvin, N. Y. ....Specimens of Amatito, T. W. R., from Jamaica, W. I.....Seeds, from Geo. Latimer, Esq., St. Johns, Porto Rico, W. I.....Broom Nest, Mr. Faitham, New Utrecht, L. I.....Sorghum Molasses, E. A. Van Meter, Washington, Ill. ....A piece of fine floor which Col. Ellsworth felt, Mr. Frederick, Alexandria, Va.....A Bouquet of skeletonized flowers, leaves, seeds and capsules, in a glass case, one of the most beautiful and natural parlor ornaments extant, W. F. Heins, Woodstock, N. Y. ..Wasps' nest, W. F. Heins, Woodstock, N. Y.....Sorghum Molasses, fine, John Manwaring, Mendota, La Salle Co., Ill.

CURIOSITIES.—Briar, from which briar wood pipes are made, Jas. T. Sample, Allehany City, Pa. Sutler to the Round Head Regiment.....Bark of the Palmetto Tree, brought by Jas. T. Sample, from Port Royal. S. C.

Seeds for Free Distribution to all Subscribers for 1862 (Vol. 21.).

Every subscriber to the Agriculturist for 1862, *is invited to select* **four or five parcels** *of seeds from the list below.*

These seeds are all valuable. Of the **90** kinds offered, many are *new* varieties, but we include some common useful sorts for convenience of those without access to good seeds.

Most of them are annuals (reproducing seed the first season), and in all cases there will be enough to yield a good supply for future use. Our aim is to furnish the germs of future abundance in each locality where these seeds go.

Many of these seeds were grown by ourselves, the past year; the others are obtained of the best growers here and in Europe. The distribution will begin the last of February.

Mode of Distribution.—The seeds may be called for at the office after Feb. 25, or be applied for by mail at any time now, to be forwarded when ready. **The postage is only 4 cent per ounce under 1500 miles; and 2 cents per ounce when over 1500 miles.**

Those sending for seeds to be forwarded by mail, will please *carefully* observe the following

DIRECTIONS.—(1.) Select from the list below, any four or five parcels desired, and write *plainly* on a slip of paper the *numbers* (only) of the kinds of seeds wanted. (These numbers are used on our seed drawers, seed bags, &c.)

(2.) Enclose the slip in a prepaid envelope—directed in full to your own address, as here shown, and put upon it postage stamps to the amount of **one cent** *for each ounce of seeds to be inclosed*, if **to places under 1500 miles, or two cents if over 1500 miles.** Most places West of the Mississippi river are over 1500 miles. The exact total amount of stamps required can be reckoned from the table of rates below. Any fraction over even ounces will require a full 1-cent stamps according to distance. Forward the above prepared envelopes to this office, and the seeds will be carefully packed to the numbers on the enclosed slip. To save letter postage, let there be *no marks on the envelopes* except the address and stamps. (Letters and notices will go by common sized envelope.

John Smith,
Post Office,
Munroe County,
State.

Field, and Vegetable Garden Seeds.

No.		*Weight of package.*
183	—Mammoth Long Bearded Spring Wheat.....One ounce.
2	—Improved King Philip Corn.....One or two ounces.
141	—Darling's Early Sweet Corn.....About one ounce.
142	—Stowell's Evergreen Corn.....About one ounce.
98	—Long Red Mangel Wurzel.....About one ounce.
187	—Comn. Broad Leaf Tobacco.....About one-eighth ounce.
188	—Genuine Havana Tobacco.....About one-eighth ounce.
189	—Sweet Scented Tobacco.....About one-eighth ounce.
180	—Spelt or German Wheat.....About one ounce.
99	—Norbiton Barley.....About one ounce.
	8—Daniel O'Rourke Pea.....About one ounce.
	9—Champion of England Pea.....About one ounce.
	99—Prince Albert Pea.....About one ounce.
	13—Green Edible Pod Pea.....About one ounce.
	13—Enfield Market Cabbage.....About one-fourth ounce.
	14—Flat Dutch (Winter) Cabbage.....About one-fourth ounce.
	193—Improved Stonehouse Cabbage.....About one-fourth ounce.
	199—Red Dutch Cabbage.....About one-fourth ounce.
	15—Early Purple Vienna Turnip Rooted Cabbage.....About one-fourth ounce.
	150—Early Paris Cauliflower.....About one-eighth ounce.
	147—Improved Short Prickly Cabbage Lettuce.....About one-fourth ounce.
	72—Imported Brussels Sprouts.....About one-eighth ounce.
	18—Improved Long Orange Carrot.....About one-fourth ounce.
	148—Long dark Blood Beet.....About one-half ounce.
	149—Early Nutmeg Bassano Beet.....About one-fourth ounce.
	95—Hubbard Squash, pure.....About one-fourth ounce.
	193—Green & Italian Red Tomato.....About one-eighth ounce.
	154—Ice-cream Water Melon.....About one-eighth ounce.
	155—Gilliflower Netted Muskmelon.....About one-eighth ounce.
	194—Hollow Crown Parsnip.....About one-fourth ounce.
	156—Extra Curled Parsley.....About one-fourth ounce.
	151—Yellow Danvers Onion.....About one-fourth ounce.
	152—Fine Large Cheese Pumpkin.....About one-fourth ounce.
	17—Red Strap Leaf Turnip.....About one-fourth ounce.
	71—Long White French Turnip.....About one-half ounce.
	195—Early Scarlet Horn Carrot.....About one-fourth ounce.
	74—Solid White Celery.....About one-fourth ounce.
	75—Sage.....About one-eighth ounce.
	156—Summer Savory.....About one-eighth ounce.
	197—Long Red Mangel Wurzel.....About one ounce.
	196—Green Curled Kale.....About one-fourth ounce.
	198—Improved Large Egg Plant.....About one-eighth ounce.
	21—Winter Cherry.....About one-eighth ounce.
	197—Lima or Sugar Beans.....About one-half ounce.

Flower and Ornatmenal Seeds.

89—Cotton Plant (2 kinds, mixed).....	One-half ounce.
111—Castor Oil Bean	One-half ounce.

On an average any five of the following varieties will go to the ounce, per stamp, (or one cent per ounce.)

200—Fancy Gourds, (mixed varieties) *(ha)*	212—Fine Sweet Peas, *(ha)*
201—Scarlet Chinese Egg Plant, *(ha)*	124—Whitlavia, *(ha)*
202—Diamond Oats, *(ha)*	125—Candytuft, *(ha)*
177—Graceful Quaking Grass, *(ha)*	123—Gilia tricalis, *(ha)*
23—Mignonette, *(ha)*	126—Clarkia elegans, *(ha)*
24—Zinnia, *(ha)*	163—Clarkia pulchella, *(ha)*
31—Chinese Pink, *(ha)*	127—Virginian Stock, *(ha)*
32—Portulacca Mixed, *(ha)*	168—Swan River Daisy, *(ha)*
33—Phlox Drummondii, *(ha)*	128—Mixed Scabiosas, *(ha)*
34—Passel Flower, *(ha)*	40—Eschscholtzia Californica, *(ha)*
35—Nemophila Insignis (Mixed) *(ha)*	213—Xeranthemum Annum *(ha)*
203—Mexican Poppy, *(ha)*	214—Lobed Tubed Centranthus, *(ha)*
204—Red French Poppy, *(ha)*	216—Autumn Roseum, *(hha)*
205—Mixed Annual Larkspur, (mixed colors) *(ha)*	214—Balsam Vine, *(hha)*
183—Fine Mixed German Asters, *(ha)*	37—Cockscomb, *(ha)*
206—Golden Striped Flowering (everlasting) *(ha)*	35—Cypress Vine, *(ha)*
208—Common Globe Amaranth, (everlasting) *(ha)*	207—Rhodanthe Manglesii, (everlasting) *(ha)*
210—Convolvulus Tricolor, *(ha)*	122—Mixed Canterbury Bells, *(hb)*
172—Mixed Larkspur, *(ha)*	125—Standing Cypress, *(hb)*
167—Malope Grandiflora, *(ha)*	42—Foxglove, *(hb)*
211—Fine Mixed Lupins, *(ha)*	209—Dwf Chinese Larkspur, *(hp)*
	171—Forget-Me-not, *(hhp)*
	215—Eccremocarpus Vine, *tp*

* *(ha.)* hardy annual; *(hha.)* half hardy annual; *(ta.)* tender annual: *(hhA.)* half hardy biennial; *(b)* tender biennial; *(hp.)* hardy perennial: *(hhp.)* half hardy perennial; *(tp.)* tender perennial.

Containing a great variety of Items, including many good Hints and Suggestions which we give here in small type and condensed form, for want of space elsewhere.

"All in a Heap."—To Correspondents.

—This being a general time for renewing subscriptions, it very naturally happens that our readers embrace the occasion to send in their favors—articles, items, queries, etc., they come "all in a heap." We have not the slightest fault to find with this—but return thanks for the numerous letters. We simply refer to the same to shield ourselves from any suspicion of want of attention or courtesy, at this our busiest season, if we are less prompt in referring to all letters that come, than might be looked for, without this explanation.

Please Condense.

—To some sixty persons, more or less, who have recently sent in from 5 to 30 pages of manuscript, on a variety of topics, most of them offered for sale, we must say one word. Please *condense* more. We have no time to even read through an article that occupies a page in giving only one idea. There is a single item of not over 20 lines in this (February) number, which contains the *essence* (every useful thought, and hint,) of all that came in a manuscript of nine foolscap pages! There are only 32 pages in each paper, all told, and we desire to condense a great deal into them. A RULE: *Any article designed for publication in the Agriculturist, and containing a certain amount of information, is valuable just in proportion to the smallness of the space it occupies, provided its statements be clear, with all needed particulars to make it complete.*

Our War Maps

appear to have given general gratification, judging from the very numerous references to them in letters received. The contending armies have been nearly quiet since our last—they are apparently gathering up their strength for a terrible conflict, or series of conflicts. We are in doubt as to what point will next come into prominently enough to need illustration, and therefore send this number to press without new maps—having already fully illustrated Missouri, Kentucky, part of Tennessee, Eastern Virginia, Port Royal, Tybee Island, Fernandina, and New-Orleans, in our last three issues.—P. S. As we close up these pages, (Saturday, Jan. 18,) the reports are, that stirring events may be looked for on and near the Eastern coast of North Carolina and Southeastern Virginia, and we will therefore give, on page 36, a map of that region.—**2nd** P. S. *Jan.* 20.—The telegraph reports there has been a great battle at Somerset, Ky., resulting in the defeat and death of Gen. Zollicoffer. Somerset is 85 miles Southeast of Frankfort. This, and all other principal towns in Kentucky and in Northern Tennessee, are fully shown in the *Agriculturist* maps, given in November and January.

Boys on Farms.

—In response to our inquiry in the January *Agriculturist* we have a number of letters from reliable men and excellent farmers. These can be consulted at this Office.

Linnæus Rhubarb Seed Worth Trying.

—As announced in last volume, we have a large quantity of very fine pure seed, gathered by ourselves last Autumn, for our Seed Distribution, (No. 197). The Linnæus is the best variety, and though the seed is not certain to reproduce exactly the same variety, it will be most likely to furnish many plants quite equal to the original. Every family that can not obtain the pure roots, and thus save a year or so in time, should sow the seed. It will be especially valuable at the West, and other points distant from reliable commercial gardens or nurseries. Time will be gained by starting the seed in a hot-bed and transplanting the first of May to a rich garden soil, and pushing the plants forward by occasional waterings with liquid manure. They will afford considerable picking the next year, and only the plants proving best may then be preserved, to be multiplied as desired, by dividing the roots. In the absence of a hot-bed, sow early in the open ground, in a sheltered place. Make the soil very rich with stable manure, and treat as above directed for hot-bed plants.

Death of a Royal Patron of Agriculture and Horticulture.

—Since our last issue, the sad intelligence has come of the death of the Royal Consort of the Queen of England, Prince Albert. While occupying so high a position, he ever justly considered that he could render the greatest service to his people by

fostering in them a love for rural occupations. This he did not by advice alone, but by *example*. His farm, his stock, and his garden, cultivated under his own eye and direction were models to be imitated. He thought it not unbecoming to serve as an active officer in both the Royal or National Agricultural and Horticultural Societies of England. To the Presidency of the former Society he was elected the past year, and he held a similar office in the latter Society for two or three years past. Since his death the Queen has requested that the Horticultural Gardens should be considered under her peculiar and *personal* patronage—a touching mark of respect for her deceased Consort. We are glad to know that prior to his death, Prince Albert exerted his utmost influence to quell the senseless clamor for war with America, and counselled peace with a great agricultural people to whom he was attached by kindred tastes, and national courtesy. We regard with pleasure the banner which was suspended across the street in front of the *Agriculturist* Office, on the occasion of the visit of the Prince of Wales, on which is inscribed, "WELCOME TO THE SON OF ENGLAND'S NOBLEST PATRON OF AGRICULTURE." We had hoped during the coming Summer to in person pay our respects to the father, and examine for ourselves the farm and garden under his supervision. But that can not now be.

Training the Currant.—D. S. Yes, it can be trained, and to good advantage. You may let it grow up into a scrubby bush, with a dozen stems from the ground; but in that case, you must make a desperate effort every other spring, and cut out the old wood. It is preferable to make a miniature tree of each plant, and trim and shape it like a handsome pear-tree. Or, if you want variety, you may train it on a frame or trellis, spreading out, and about three feet high. By the last two methods, you will get larger, handsomer fruit.

Apples from Seed.—H. Grundy, Macoupin Co., Ill. Apple seeds will not produce the same varieties as planted. Seeds from good sorts are most likely to yield good apples.

Dwarf Apple Trees.—The Country Gentleman recommends planting dwarfs on the Doucain stock 8 feet apart, and 6 feet on the still smaller Paradise stock, for garden culture. The latter will yield crops the second, and the former the third year from planting. Among the varieties most suitable for dwarfs are: Red Astrachan, Jersey Sweet, Porter, Baldwin, Dyer, Summer Rose, Benoni, Sweet Bough, Northern Spy, Twenty Ounce, Wagner, Early Strawberry, Fameuse, Canada Red, etc. All the above will need more or less pruning either in the top or side branches to preserve a good shape.

Packing Grapes, Peaches, etc.—An English gardener who sends grapes and other tender fruit long distances, first covers the bottom of the boxes with wheat bran, then a layer of fruit carefully wrapped in soft paper, sifting in bran to fill the crevices, shaking the boxes a little and repeating this until the box is filled. Fruit packed in this way is said to bear long carriage without even losing the "bloom," which is most important as its presence is proof of careful handling.

Winter Pears.—"Central New-York." Winter pears are *not* "a humbug." They often fail, but with proper care, will generally succeed. The fruit should be as well ripened as possible before gathering; therefore let it hang on the tree until just before hard frosts; then pick on a dry day, put in boxes or barrels in a cold cellar, and cover tightly. When the proper period for the ripening of each comes, take them from the cellar and put them in a warm closet, say ranging from 60° to 70°. Keep in the dark, and they will slowly color up and become tender and juicy. As we write, the fine flavor of a Winter Nelis is on our tongue. Among the best sorts, we name: the Lawrence, Winter Nelis, Easter Beurre, Passe Colmar, Beurre d'Aremburg, and Vicar of Winkfield. Beurre d'Anjou ripening in November, is first-rate.

Varieties of Pears for an Orchard.—" Subscriber," in TIOGA Co., N. Y., asks what varieties of standard and dwarf pears we would advise planting for market use, ripening early and late, on 3 acres of land, setting the standards 20 feet apart, with dwarfs between them..... This will take about 325 standards, and about three times as many dwarfs, or 975, planting them between the standards each way, and setting a tree in the centre between each four standards. For the standards we would plant 10 each of Tyson, Madelaine, Beurre Superin and Winter Nelis; 20 each of Rostiezer and Beurre Giffard; 25 Fondante d'Automne; 30 each of Lawrence and Beurre Clairgeau; 58 Flemish Beauty, and 100 Bartlett. For the dwarfs we would take 25 each of Tyson, Kirtland, Doyenne d'Ete, Seckel, Doyenne d'Hiver Noveau, Flemish Beauty, Bartlett, Glout Morceau, Henry IV., Napoleon, and Stevens Genesse; 50 each of Rostiezer, Duchess d'Angouleme, White Doyeane, Beurre Diel, Easter Beurre, Fondante d'Automne, Beurre Superin, Beurre d'Anjou, Vicar of Winkfield and Winter Nelis, and 200 Louise Bonne de Jersey.

Protecting Tender Vegetation.—(A. P.) During this month and the next, see to it that the tender fruit tender trees are carefully protected. Young pear trees, cherries and even apple trees a few years planted, are benefitted by setting up a board on the south side of the trunk, to keep off the sun. Or, if you please, wind a thin band of straw around them. Examine your shrubbery and tender plants, and see if the heavy snows have not broken off their wrappings, or if the dogs, hens or rabbits have not scratched them off. These two months are the most trying of the year to tender vegetation.

Double Flowers.—A correspondent of the *Agriculturist* from Boston, states that from the same parcel of seed he raised stock Gilliflowers, in 1858 almost all double; in 1859 half, and in 1860 two thirds were single. The reason is obvious. It is an excess of vital force exercised in a given direction that makes a double flower—where this excessive vitality is lost, we might expect the flower to be single, and so it is. It is interesting in this connection to note that this loss of vital force which obtains should increase the ability to bear seed.

Poor House-plants.—(Jane.) Your trouble arises from too dry an atmosphere. A coal fire is worse than a wood fire for plants. Suppose you try, next year, a collection of Cactus plants. They are odd if not pretty; and they will stand heat and dryness, without wincing. The Epiphyllums and Cereus sections have magnificent flowers. Try the Aloes. They have quite a tropical look, and only need an occasional sponging. Can't you put a few of your fine plants under glass shades?

Castor Oil Bean.—H. A. Curtis, Portage Co., O., is informed that the Castor Oil is made from the seed, called a *bean* (seed list, III.) produced by this plant. There are certain dwarf varieties for garden and greenhouse culture, which so far as we know, are neither more productive nor earlier than the common kind. The oil is simply expressed and subsequently purified. Probably in Portage Co., O., the culture would not be profitable.

Chickweed.—R. W. Tell your friend that chickweed is an annual plant. It grows from seed every year; so, if he does not let it go to seed, as soon as all the seeds in the ground have sprouted he will be troubled no more. Hoe the ground often in hot dry weather. This will destroy the weed effectually. The culture of root crops and cabbages we would recommend if the ground is suitable and very full of seed.

The Tap Root.—"William." As to whether you should cut it off, will depend upon circumstances. "When nature," observes a writer, "puts a tap-root at the bottom of a tree, or a tail on the *other* end of a pig, she does it for some good purpose, and neither of them should be cut off without a valid reason." As to the pig, we won't debate, but as to trees, we know there are good reasons, at times, for amputating the tap-root. In seedlings standing in nursery rows, the central roots shoot down strong and deep, and must be cut off early, if we ever expect to transplant the trees. It is so with the oak in a remarkable degree. Cut off the tap-root when the tree is small, and a new set of horizontal roots will be formed, with many forks and numberless small roots and spongioles. And then, the transplanting will be easy, and the living quite a sure matter.

To Prevent Suckers.—R. M. S. Keep the soil loose and clean; apply in early spring unleached wood ashes and bone earth; and cut off the suckers with a sharp knife as soon as they appear.

Rape Seed Oil.—Why, asks a German subscriber, is not Rape grown as a field crop in this country, where spring frosts are not very heavy? I do not envy the Pennsylvanians for having discovered the coal oil fountains, for I can not get used to that. I want the pure, clear oil from winter Rape seed, which is without odor, and gives a soft, beautiful light. In Germany many of our large farmers pay their high rents from the sale of rape seed and wool alone.

Keeping Seed Peas from Bugs.—P. Hammer, of Boyd Co., Ky., writes: "Put the peas in bags, and for every quart add two handfuls of fresh wood ashes. Shake the bags well, and keep in a dry place. I have tried this several years, and the peas have always remained as sound and fresh after a year as when first put up, and no bugs or weevils were found in them.' We think they must have been free from bugs when put up, for the eggs from which the bugs hatch, are laid in the peas when growing in the pods. The dry ashes around them would hardly prevent the development of the bugs inside the kernels, where they grow, and come out to multiply usually after the peas are grown.

Cotton Seed—A Caution.—The interest awakened in reference to the culture of cotton in the Southern tier of the Middle States, is already leading to speculation in the seed; and, according to the newspapers, Government has appointed an agent to procure seed at Fort Royal, and distribute it through the West. Large quantities of Sea-Island Cotton are being brought to this City before ginning, (cleaning from the seed,) so that there will be plenty of this kind of seed. But we will remind the readers of the *Agriculturist* that the Sea-Island cotton can not be cultivated, with hope of a crop, away from the sea-board, and there only in particular localities. The "Upland Cotton" as it is called, is the kind to experiment with. The two kinds of seed are very readily distinguished. The Sea-Island seed is nearly black, and has a *smooth, naked shell*, except a small belt of cotton, hardly larger than a pin-head, on the small end—with sometimes a very little on the other end, and along one side. The Upland seed, on the contrary, is of a brown or chocolate color, and is *completely covered* with a mass of short cotton fiber which adheres so firmly as to require scraping with a knife to remove it. We have for some years distributed small parcels of cotton seed to grow as an ornamental plant, as both kinds will generally *bloom* in this latitude and even further north, under favorable circumstances. We put in each paper a few of the Sea-Island seeds to give greater variety of bloom.

How to Germinate Seeds.—S. McC., Nemaha City, N. T. Locust seeds ought to germinate without difficulty if planted early. If they do not, sow with sand, in a shallow box, and set the box in a sunny place, in the ground, top even with the surface. The freezing and thawing will prepare them to germinate in early Spring, when they may be planted. This, it will be seen, is Nature's way of doing the same thing. For the currant and gooseberry seeds, do likewise, except that the boxes should be in a sunless place—like the north side of a fence. If exposed to the sun they may germinate in Winter, and so lose their vitality before Spring. Sometimes we have induced germination in inert seeds by swelling them in very dilute, clear bleaching powder water, about 24 hours. Weak "Chloride of Soda" solution would do as well.

Seed not Injured by Freezing.—G. E. Wheeler, Fond du Lac, Minn. When well dried seeds are not injured by freezing in a dry room.

Basket Willow—Time for Cutting, etc.—S. C. Cut while the bark will yet peel easily, but not till the year's growth is about made, as the better the wood is ripened the better the quality of the osiers. The best time, in this latitude, is usually in September, or possibly a little earlier. New-York is the best market. Of the price at this time, it is difficult to speak, because there have been few sales of the article since the war commenced. At retail, in small quantities, four cents per pound may be considered the current price. Until the war is over, farmers may do better with other crops. Dealers say that much depends upon the quality, and that machine peeled osiers are worth little or nothing.

Grape Roots growing into Mortar.—Hiram Tarbox, of Windham Co., Conn., communicates to the *American Agriculturist* the following interesting fact from his own experience. In a cold grapery, in which three years ago, a pier for a hot-water pipe was laid in clean white mortar of sand and common lime, and at the surface a flat stone was put on, a black Hamburg grape vine was set about two feet distant. The roots extended to and actually grew into the mortar, filling it literally full of fibers. The mortar was of course kept a little damp below the surface. This would indicate that grape roots are fond of, or stimulated to active growth by lime.

The Prettiest Climbing Plants.—"Clara." The question involves too large a reply for our Basket. In a month or two more, we will say something at length on the subject. Meanwhile, a word or two. The Maurandias, pink, white and blue, are favorites with us. The Madeira vine is a very pretty thing in its foliage, the flowers come quite late, and are small, but very fragrant. Cobæa scandens is a wonderfully rapid grower. The Nasturtiums are desirable for the latter part of summer—for fruit (pickles), as well as beautiful for bloom. Phaseolus multiflorus should not be discarded. Of course the various colored Morning Glory is familiar to you.

"Western Plantation Syrup."—This name is adopted as the regular brand for the Sorghum Syrup, after being refined by the "Chicago Sugar Refining Company." This Company offers to receive at any of the railroad stations in Chicago, the crude syrup, as boiled down in the country; to refine it, and to return to the depot 75 gallons of refined syrup for each 100 gallons received. This includes the charges for cartage, cooper work, and the barrels, etc.

Refining Sorghum Syrup.—L. Martin, Sangamon Co., Ill. Your queries are mainly answered on page 42. The process of refining the Sorghum Syrup is a principle somewhat like that practiced at the South for the common cane. The crude syrup is boiled with a small quantity of lime-water, to neutralize any acid formed. The juice is then passed through filters or strainers of bone-black (bones charred by burning so as to fall to pieces). It is then boiled to the desired thickness.

Sorghum Syrup.—Wm. Turke, New-Bremen, has made 1,200 gallons of Sorghum syrup. He ground the cane and evaporated the juice for his neighbors at 25c. per gallon. His syrup sells in New Bremen at 75c. per gallon. The seed is not near as good as formerly, only one half giving good canes. He asserts the need of a new importation of seed.

Sorghum in Michigan.—Almon Maltby writes to the Michigan Farmer, that he manufactured 320 gallons of good syrup from two acres of ground. This from Livingston Co., in latitude 42½°, is a favorable indication of what may yet be expected from the "Chinese Sugar Cane" at the North.

Couch, or Quack Grass.—"C." Groton, N. H. The grass you send is the one named above. It is a detestable weed, but makes excellent hay.

"Skirving's Improved Swedish Turnip."—Some seed sent to us from the Patent Office was sown June 24, on good soil, by the side of other varieties. But after standing in the ground until Nov. 13, it had not a bulb the size of a finger, while the other kinds produced well. As this variety stands high in England, we think the fault must have been in the Department at Washington. We had hoped that after the dismissal of "D. J. B.," no more mulleins would grow from "improved tobacco seed." Perhaps some old purchases of seed may have been left behind. Whoever has charge there should gather up and burn the contents of the old seed drawers, and not trouble the country with them—and himself take warning from the past.

Kohl Rabi.—The wife of a subscriber is informed that this vegetable may be cooked like a turnip or cabbage, and eaten in the same way. Cut in half inch slices to boil and change the water in boiling once or twice. Serve mashed with butter or cream, or not mashed but with drawn butter or cream poured over it. For Winter use they should be treated like a cabbage. Always use them before the eyes in the axils at the base of the leaf stalks start to grow.

Wire Worms.—W. F., of Warsaw, N. Y., has land materially injured by wire worms; by a *course of cultivation*, he has, as he thinks, rid his land of the pest. After giving an account of three experiments to the *American Agriculturist*, he writes: "My opinion is that three crops of buckwheat, potatoes, beans, or peas, will entirely starve out the wire worm. I have found, sometimes, that Fall plowing was best—not always. If land is to be sowed early, then plow in the Fall: if late, it will make little difference, so far as worms are concerned."

Rose Bugs on Grapes.—B. H. S., South Yonkers, N. Y. Your trouble with rose bugs on grape vines is nothing new. This little beetle genus, *Melolontha*, appears annually, sometimes in countless numbers, attacking roses first, but extending their ravages to cherries, plums, grapes, and other plants. The laying and hatching of their eggs, and transformations, are an under-ground work: done out of sight and reach of man. They can be attacked only when in their perfect state, and at their mischief. The females, which constitute about half the number. deposit some thirty eggs each. Like other insects, they have their natural enemies; so every person who crushes a hundred may consider that he is working with the other Heaven-appointed instrumentalities to hasten their disappearance. Poultry destroy a good many, but when abundant these soon become satiated.

Lime for Lice on Cabbages.—Wm. W. Bailey, a lad, writing to the *Agriculturist* from Genesee Co., N. Y., says he was whitewashing a fence by the side of some cabbages badly affected by plant lice, (aphis,) and to try the effect of lime upon the insects. he sprinkled whitewash upon the leaves and stalks, which entirely destroyed the lice.

Security from Bee Moths.—"M," Tipton Co., Ind., thus writes to the *American Agriculturist*: "The bee-hives of all my neighbors, and my own also, suffered considerably from worms. I got rid of them by following the advice of a friend, viz.: Don't put the hives of young swarms on boards, but on bricks, closely laid together, fill the space between the bricks with wood ashes, brushing off all that may lie on top. The moth does not lay her eggs on stones, as the sun does not hatch them out there, but always on wood. My hives have been free from these worms ever since."

Swans at the Central Park.—It will be recollected that the free city of Hamburg presented 12 pure white swans to this City, two years ago, for the beautiful sheet of water in our Central Park. Unfortunately, several of them died soon after they arrived here, but more were subsequently sent. They appear very much at home, sailing gracefully about in the water, and are one of the chief attractions to the thousand visitors daily enjoying the fine scenery of the Park. The swans commenced breeding, for the first time last season, four nests having been made in nooks near the water. Two were deserted after a severe thunder-storm, but from the other two broods of cygnets were hatched. The young might be seen swimming by the side of the old ones, or raising their long necks from the grass which concealed their nests.

Poultry—Weight of Dorkings.—W. J. of Westchester Co., N. Y., referring to the 7 to 8 lbs. weight of "crammed poultry," (January *Agriculturist*, page 9,) says he was led to weigh his grey Dorking pullets of 1861, and found them to run 7¼ lbs. each. The young cocks of same breed weighed 8 and 8½ lbs. Of the older broods, the hens weighed 8 to 9 lbs, and the cocks 10 lbs. each. They were in ordinary condition. He esteems this breed the best for general use, for, besides their heavy weight, they are good layers also.

Chickens.—S. K., Dayton, Ohio. Chickens do better to have a range, but if the crops are likely to suffer by them, they will do very well in the hennery, if allowed but a limited run—enough to secure plenty of fresh air. They should at least be let out awhile morning and evening, and have green food of some kind—grass in summer, and cabbage sprouts, etc., in Winter.

Frozen Eggs.—Sophia J. Damon, of Plymouth Co., Mass., says frozen eggs should be kept in that state until wanted for use, then put in a dish of *cold* water, and set on the fire to thaw gradually. When the water will just bear the finger, they may be broken, and will be found as fresh as when first laid.

Nest Eggs in Winter.—"J. B." If the glass or porcelain eggs can not be had, make imitations of wood and paint white, or make them of chalk. By breaking a small hole in each end of an ordinary egg, the contents may be blown out with the mouth, and the shell used for a nest egg. They will be perfect if filled with plaster, or rosin, or any substance that will set hard, and will not melt by the heat of the hen.

John Sanderson's Large Ox.—Z. D. Bardwell, of Franklin Co., Mass., sends the measurement of a large ox, owned by John Sanderson, in that County, and asks if any of the readers of the *American Agriculturist* can report a larger animal,—"Age of ox, 8 years; girth back of shoulders, 10⅔ feet; largest girth forward of hips, 11½ feet; hight, 6¼ feet; length from between the roots of the horns to the root of the tail, 9⅔ feet; breadth across the hips, 3½ feet; distance from point to point of shoulder, 3½ feet; greatest distance through shoulders, further back, 4¼ feet; length of span, 8 feet; inside distance between the fore feet, as he stands eating naturally, 26 inches; live weight, **3,500** pounds, in October, 1860, since which time he has not been weighed. [Are there no scales large enough in those parts?—Ed.] He has been fed 12 quarts of meal per day—a mixture of corn and oats—and eats as well now as ever. He has the range of the yard, and lies under the barn opening to the East."

A Great Hog.—We have to-day (Jan. 17,) seen a pure Suffolk hog, at 90 Cedar-street, worth looking at. He pretty well fills a one-horse wagon box, and weighs dressed **1,053 lbs.,** or more than half a tun. Live weight on the 14th inst. **1,393** lbs. Age 19 months. Fed and slaughtered by W. H. Libby, on his farm in Madison, N. J. Was imported at 3 months old, from Suffolk, England, by Frank Lathrop, for breeding but became too large and was castrated at 9 months old. Fed on corn meal, milk, etc.

Kind Treatment of Animals Profitable.—The horse serves us with a superior ability and a better *will*, if treated kindly. On the same condition, the sheep gives us a better fleece; the ox, more efficient labor; and the swine, a better carcase. The cow, that is dealt gently with and made contented with her lot, gives us, not only more milk, but of a richer quality, than if ill treated, fretted and made miserable. All animals make a better return, if cared for considerately. "The merciful man is merciful to his beast." He would be so if there was no reward. We owe it to the animals, which are put into our power; we owe it to ourselves: and we owe it to God, who has given us power over them, to make the brief space we intend for them, free from all unnecessary suffering.

Remedy for Kicking Cows.—D. Parker, Jr., of Green Co., Pa., writes: When a boy, I saw an article in a paper stating that tying a cows head a little higher than she ordinarily holds it, would prevent kicking because a cow lowers her head and rounds up her back, when she kicks. My father tried it and found it to answer, except in the worst cases. The remedy has been used in the family ever since.

Mad Itch in Sheep.—G. U. S., Luzerne Co., Pa., writes that "a new disease has lately appeared among the sheep of his neighborhood, called the 'Mad Itch,'" and wishes information. We have never known this name applied to a form of the "scab," to which it might, with all propriety, be given, but presume that this is the ailment—a subcutaneous disease, causing intolerable itching, but not affecting perceptibly the surface of the skin. Youatt says it is not contagious, and recommends housing, shaving, washing with soap suds, and then, every other day, washing with lime water and a decoction of tobacco. We have never met with the disease but should we ever have to treat it, would surely administer flour of sulphur pretty freely in milk, and perhaps turpentine, or tar in small doses, so as to bring the disease out upon the surface, and then treat it like common scab. Diseased animals should be most completely separated from the rest of the flock.

Too Much Opium for Sheep.—In the prize article last month, which was generally correct, a bad error occurred on page 13, which we did not notice until too late to correct it. The writer prescribes a scruple (20 grains) of opium for a sheep. We suspect a sheep weighing 150 lbs. would require no more opium than a man of the same weight. *One* grain of opium, or 20 grains *tincture* of opium (laudanum,) would be nearer the mark.

Why Not Eat the Heart?—On one of the closing pages of this paper, will be found two articles which have cost us a great amount of labor, and which will be well worth studying and saving for reference, viz.: "*New-York Live Stock Trade, for* 1861," and "*Items in a Meat Bill.*" There are several items of a kind never before published together, such as those giving the average weights, shrinkage, etc., of animals, and especially those referring to beeves' offal. But we commenced this to speak of one item there noticed, viz.: that Beeves' Hearts average 6 lbs., and yet sell for an average of only 10 cents each, or 1⅔ cents per lb. We visited a large number of butchers, in order to get at the correct figures in the article, and they nearly all said it was difficult to find purchasers for beeves' hearts at above 10 or 12 cents each. Said one: "If a poor woman comes to my stall to spend her last 20 cents for meat, she will take 1¾ lbs. of steak, and refuse two beeves' hearts, weighing 12 lbs., for the same money." We can hardly account for this, when, pound for pound, the heart is as nutricious as any other part of the animal. *Query.*—What is the best method of cooking and serving a beef heart?

An Aged Cat.—We do not remember to have seen any statement of the age of cats. It seems to be the general impression that, at 6 or 8 years old, pussy is an "old cat," if not *the* old cat. According to the N. H. Jour. of Ag., there is in the family of J. G. Wilson, of Lee, a cat 25 years and 7 months old, as categorically demonstrated by the family register. This must be *the* very old cat. If anybody has an older one let it be recorded in the *American Agriculturist*. Can any one tell us the average age of cats?—that is, of those allowed to live out there natural lives.——It is commonly reported that some cats have "nine lives." What is the length of each life?

Tan Bark for Manure.—We do not think very highly of it, in its crude state. A farmer in our own neighborhood, is now (Nov. 13th) hauling it from the tannery, and spreading it over his meadows, confident that it will benefit them. Good luck to him! For our

own part, if we were to use it, we should employ it first in a dry state, as an absorbent of urine in the stable, then, let it lie in the manure heap a full year, to decompose. A method employed by some, is to spread the tan in an open place, eighteen inches or two feet thick, then shovel on a layer of lime two or three inches thick, then from four to six inches of tan, and so on until all the tan is used up. Wait nearly a year, then shovel the heap well together, and let it lie several months more.

Substitute for Stable Manure.

—"A Novice" inquires of the *Agriculturist*, "What manure would you recommend, in the absence of barn-yard or stable manure, for a small place of two or three acres to be used for vegetable and fruit culture. The soil is good old pasture ground and very rough." ... Go to work at once to make compost, buy (for of course you have money) such articles as damaged glue, leather scraps, refuse bristles and clippings from the brush makers, blood, etc., from slaughter houses, horn shavings, soap boilers waste, fish offal, and we may add, animals of all sorts, particularly old horses. All these things, and others too, may at times be bought much cheaper than any other fertilizers regularly in market, and a good man who takes an interest in it will compost them with earth, turf, muck, soils, or some such material, so that they will be inoffensive and make a very rich manure. Wood ashes, lime, soap boiler's waste, and other alkalies should not be mixed with animal substances, except to force a fermentation in cold weather. In working the soil add bone dust freely and directly, especially where fruit trees are to be set.

Lime.

—"X." asks: After lime is slacked, how long will it remain in a caustic state if kept from the rain as in an open shed?—*Ans.*—Say, six or eight weeks.—It very readily attracts carbonic acid and becomes inert.—Ed.... If it should get hard as for instance, when the water evaporates from a whitewash barrel and it leaves the lime hard and lumpy, can it be easily reduced to powder?—Not easily till it is so dry as to be readily powdered.—Ed..... Is it right or wrong to mix lime with the muck which is to be used in the stables, or cow yard?—Right, three months beforehand.—Ed.

Manure in the Cellar.

—G. W. S., Gilmanton, N. H. Were fresh manure, that is dung and litter mixed and unfermented, to be applied *and plowed under*, there would be no loss of any thing. When manure lies in a cellar or well made dung heaps, or compost heaps, it ferments and *should* lose only carbonic acid and water, a small quantity of ammonia is doubtless lost, but it is very small, if the manure heap is kept compact and moist.

Top Dress Meadows.

—As soon as the grass is cut if you have, and you should have, fine rich compost. Manure from the dung heaps (more or less rotten) may be applied late in autumn or early winter, before the ground freezes.

"How to get and Use Bones."

—H., says he is at a loss. "They cost too much." The boys will collect them for a few cents a bushel about the village. Many may be saved in the family, and with a little care you will be able to collect plenty at a price not to exceed ¾ cent a pound.

To Dissolve fresh Bones.

—There is no Patent on the method and it is worth 25 years subscription to the *Agriculturist*.—*Pound them up fine and feed them to hens.* This is the best time of year, though it is good at all seasons.

Hulled Corn and Hominy.

—J. C. Brattleboro', Vt. We know of no machine for hulling corn by hand. There was a Hand Corn Huller in the market six or eight years ago, but nothing has been heard of it of late, and it has probably gone out of use. Perhaps here is a small field for an inventor.

Bob Sleds—Double Sleds.

—Bob sleds are well known in new, woody, snowy regions, as sleds with very short runners, designed for long timber, one end to draw on the snow. When an extra pair of runners are attached, for sustaining the hind end of the timber, or of a rack, if one be used, they are called double sleds. A subscriber in Maryland (W. Edmondson, of Ellicott's Mills,) sends to the *Agriculturist* a strong recommendation of them, claiming (1,) that the double sled runs more lightly than the single long runners; (2,) that it is more convenient for turning; (3,) that it is stronger, and carries its load over rough ground with more ease and safety. He thinks it would be useful to farmers, if we were to describe the double sled, with directions for making. At present, we can only say: the runners are to be short—say 3½ or 4 feet, and very strong; the tongue, like that of any other sled, lighter, if for horses, and heavier, if for oxen; and the connecting rod between the two pairs of runners, to be jointed near or at the beam of the forward runners, and to be so attached to the beam of the hind runners, as to admit of lengthening or shortening the distance between the two beams at pleasure.

Cleaning Spelt.

—"Meyer," Tipton Co., O. A full description of spelt or "Dinkel," is given in vol. 19, p. 104. As there stated, the chaff adheres so closely to the grain that a hulling or chaffing mill, similar to a rice mill, is required to prepare it for grinding into fine flour. These spelt mills are common in Germany, and will soon become so here, if it be found that the grain can be profitably grown in this country. This is the first thing to be established, and to have this tested is our object in distributing the seed. In Germany it yields well on soil that will not produce wheat. There will be no loss in the trial, for the grain is valuable to feed, and is thus used in some parts of Europe, where it is not needed for human food. [Many thanks for "Meyer's" kind words, and those of his good wife. Such opinions are worth working for.]

Steam Plowing.

—Mr. Robert Walkington, North Ormsby, Eng., having furnished himself with Roby & Co.'s 10 horse engine, and Smith's 5 tined, patent cultivator, for running 9½ inches depth, gives the following as the result of his experience thus far: cost of plowing 238 acres by steam, $140,48; estimated cost of doing the same equally well with horses, $389,62; difference $249,14. It is rather hard to believe that, if the interest on the cost of machinery, its depreciation by use, etc., were fully estimated, the difference would appear as great as this.

Novel Method of Filling an Ice-House.

—A gentleman residing at New-Hartford, Conn., has a pipe, leading from a spring above, pass through his ice-house. This is pierced by numerous small holes, and when the weather is very cold the house is thrown open and water turned on. The fine spray and jets freeze as they fall, and in a few days, or weeks at furthest, the house is filled with one solid "lump of ice," with no labor of cutting and hauling. So says the Winstead Herald.

The Royal Cheese.

—An inquiry in the *Gardener's Chronicle*, in regard to a monster cheese presented to the Queen by the Somerset folks, elicited these facts: "The inhabitants of West Pennard, a village near Glastonbury, Somerset, in order to prove their loyalty, resolved that a cheese should be made from the milk of all the cows in the parish, and when ripe, should be presented. An immense vat was prepared, embellished with the royal arms, etc., and on the anniversary of the Queen's coronation, 50 of the wives and daughters assembled, with *one meal's milk* from 726 cows. This amounted to upwards of 20 hogheads, and occupied the contributors from morning until night to turn it into curd. When finished, the cheese was 9 feet in circumference, 3 feet 1 inch in diameter, and 1 foot 10 inches thick. It was presented to the Queen Feb. 5, 1841." It makes little difference whether it was presented in 1841 or 1851. Carelessly written, they look much alike. The date does not affect the fact that it is one of the largest cheeses on record.

Knitting Machines—Ice.

—S. D. J., Ripley, O., inquires, whose is the best knitting machine? and whether ice-houses are not better, built underground? If any one knows of a good *family* knitting machine, he should make it public. Ice-houses built above ground are more convenient, and, if built rightly, are good enough, for they will keep ice the whole year, and will make an adjoining room cool for meats, milk, butter, etc. But they must necessarily be somewhat expensive, or make but an indifferent appearance. Where the most rigid economy is desired it may be better to build wholly or partly underground.

Removing Smoke Stains from Marble.

—"S." of Essex Co., N. J., says he removes smoke stains from marble mantels, by applying a little chloride of lime (obtained at any druggist's) wetting the chloride with water to form a paste. This will doubtless take out the stains, if they are made by smoke, but we are not certain that it will leave the polished surface of the marble uninjured.

Quick Work.

—Owing to the breaking of a Paper Mill shaft, the contractors were likely to get a little behind in supplying the paper for the December *Agriculturist*. Night came and the presses must needs stop unless a supply could be obtained by the next noon. One of the firm (of Seymour & Co.) left the City and reached the mill at Morristown N. J., at 7 P. M., and ordered paper to be made. At 10 o'clock the next morning, 16,000 sheets of paper had been manufactured, calendared, cut and delivered at our press rooms in this City, giving a supply for the day. A portion of this was printed, folded, stitched, and mailed, and was on the way to subscribers at 2 P. M., or within 19 hours of the time the order reached the Mill at Morristown, 30 miles from the City.

Profanity

—A few days ago, says a correspondent, a boy was using very profane language. He was talked with kindly, and shown how wrong he was. He seemed quite sorry, and, looking up with a tear in his eye, said, "Well, who was the first person I ever heard say bad words?—it was my *father*."—Did his father think what a lesson his words taught?—Ed.

Usefulness of Canals—N. Y. City and the Country.

—During 1851 the freight brought to New-York City through the Erie Canal and its connections, (the Champlain, Oswego, and Genesee Canals,) amounted to **1,531,529 tuns**, or **3,063,058,000 pounds**, valued at **$50,905,253**. Nearly all of this was agricultural products. The freight *from* New-York by the same routes was 93,778 tuns, valued at $20,790,404. This would show a very large balance of trade against the City in favor of the Country. But this balance is in part reduced by the fact that the freights *to* the City were mainly of a heavy character, grain, etc., and these passed over the canals, while merchandise from the City was more costly, and was more generally sent by railroad. Not a little of the balance, however, went to cancel debts of the country to the City, contracted in former years.

New Use for Diamonds.

—A circular from Montreal, L. C., describes an invention of Mr. J. Dickinson, by which a diamond is used for dressing the surface of millstones, instead of the steel pick now employed for that purpose. It is said that the lines cut by the diamond upon a new stone, are clear and distinct, with sharp cutting edges, and that they will remain in good order longer, and perform better work, than where the stone is dressed in the ordinary way. But (1,) where are we to get all the diamonds needed, and at what price, and (2,) are real diamonds large enough to "pick" mill stones?

To be an Editor.

—"Franklin," of Pa., wishes to become an agricultural editor, and to be advised about schools, etc.....Don't think of such a thing. Go to Dr. Pugh, at the Penn. Farm School, if you will, but do not try to be an editor unless you see you are unmistakably qualified, and then do it as you would enlist for the war or go a missionary to Madagascar—from a sense of duty.

An Odd Abbreviation.

—The word "*Ibid*" which may often be noticed appended to articles taken from the *American Agriculturist* and printed in other journals, is an abbreviation of the name of this paper. Our readers will bear this in mind whenever they see *good* articles thus credited to "*Ibid.*"

Good Crops.

—Geo. A. Elston, of Bradford Co., Pa., writes that his 12 acres of wheat threshed out 300 bushels (25 bushels per acre) of plump grain weighing 62 lbs. per measured bushel. His oats averaged 55 bushels per acre. These are very good crops for that section of the country, though 25 bushels of wheat per acre would not be thought much in many other localities. We like to hear of these good crops, but can not find space for publishing many such reports, because we prefer to occupy the pages of the *Agriculturist* in telling *how* to produce big crops. To tell Mr. A. that Mr. M. got 60 bushels per acre, may be pleasant news, or it may not be. If he does not know how to get 20 bushels, it may be discouraging. But tell him *how* Mr. M. gets 40 bushels and you will do him good, both in feelings and in purse.

Coal Tar.

—A correspondent writes concerning this article: "On corn it is an effectual remedy against fowls and birds. Late in the Summer I applied a coating of coal tar to the roots of young peach trees, and on a recent examination, all appeared healthy and free from worms. Will some reader of the *Agriculturist* who has tried its use for long periods give the result?" [We have heard of injury resulting from painting the stems of trees with coal tar.—Ed.]

Remedy for Poison by Ivy in Meadows.

—Wash, or, if convenient, soak the part affected in strong bark, or tan liquor, which may be prepared by boiling oak bark. So says a correspondent of the *Agriculturist*.

Driving Rats with Powder.

—James Goodwin, of Columbia Co., Wis., says, "Tie up a teaspoonful of powder in a cotton rag, and tie this to the end of a piece of blasting fuse, and push it in the rat holes as far as possible. Ignite the fuse, and before the fire reaches the powder the rats will be off on the 'double quick.'"

Lime upon Lime Soils.—R. R. Bryan, of Blair Co., Pa., writes to the *Agriculturist*: "I desire information on the subject of applying lime to limestone soil. I have plowed and subsoiled some sixteen acres of heavy sod for corn, the subsoil plow loosened the yellow earth about five inches below the bottom of the 8-inch furrow. It is called "limestone clay," and I am hesitating about burning lime, as it may be there is lime enough in soil." . . . It is an important fact that the action of lime, (fresh slacked) is often most favorable upon limestone soils. This not by virtue of its being valuable as plant food, but because it produces some favorable chemical and mechanical effects upon the soil. By all means make the trial.

Muck.—E. Gould, Wash. Co., N. Y., wants to know how to prepare muck for use, has large supply, some say burn it and use the ashes, others say slack lime in it to sweeten . . . Dig in the Winter or before; let it lie and freeze and dry; when it can be handled, mix it with manure in the barn cellar, yard, or compost heaps; or make a heap using 3 to 5 bushels of fresh slaked lime to a cord of muck, spreading the muck in six inch layers, and throwing the lime over it. Work the heap over in about ten days, and use it on the land in three weeks, or, as an absorbent with cattle manure after three months.

Carrot Tops for Dycing.—"In the vicinity of Hartford," writes a subscriber whose daughter is in East Hartford on a visit, "carrot tops, mown off, sell for $30 a ton, to be used in dyeing blue cloth." (We don't understand how the *blue* color is obtained.)

Humbugs to be Avoided.—"Free Lottery Tickets for Agents," sent to Canada, (and every where else,) by B. B. Holt, and Th. Owens & Co., hailing, at present, from Progress, N. J. *Also*, "Grand Social Banquets," "Mechanics' Union Clubs," etc., at Salem and other towns in New-Hampshire, including George Hamilton, James R. Lawrence, and all others who write letters offering to procure $100 prizes by lying, for the small sum of 25. If they tell one lie, as they offer to do for $5, they will tell another one and keep the $100—*if* drawn. *Also*, "Doctors" in Northern New-York, and elsewhere, offering $30 for distributing circulars, *if* you send 25 cents for entering your name on their "Agents' Books." *Also*, those hailing from Boston and elsewhere who offer you $20 to $30 a week if you send $1 for a pamphlet of instruction. (Why did not H. H. M. & Co, stay in England and Ireland, if they found "over 10,000" fools there?) *Also*, any one in New-York who offers $20 to $100 a week for selling sewing machines, if you will first send them $5 for a "sample." *Also*, "Rev." Edward A. Wilson, of Williamsburgh (whom we can never catch "at home"). *Also*, his *aliases* in New-York and Brooklyn, who offer cures of consumption free. *Also*, sellers of Japanese Wheat. More hereafter.

Corn Meal—To Make it Keep Sweet.—In a letter just at hand from Mrs. O'Brien, who received the first premium for Corn Bread, she says: "If you take corn meal when purchased at the market or grocery store, and put it in a pan and leave it warm in a warm stove-oven over night, it will keep better, will acquire a sweetish taste, and will rise and bake better. The little trouble to do this will be amply repaid. . . . I do not like scalding meal before using, as it tends to make it clammy, and can do little if any good; drying the meal is safer and better."

Cheap "Wringers" worse than Useless.—Just now there is no little excitement about wringing machines, and since a good article is found to be useful, the country is being flooded with all sorts of cheap affairs, from $1 upward. We must caution the readers of the *Agriculturist* at least, that as yet there is no wringer before the public worth buying which has not two cylinders, *thickly* coated with India Rubber, (at least half an inch thick all round;) and that these cylinders *must* be made to turn together by connecting cogwheels. Without the cog-wheels the rollers are liable to slip and tear the cloth, no matter how strongly it may be asserted to the contrary. Without the thick rubber, the instrument will not do its work well. No *good* wringer can be sold at retail for $5, at the present price of India rubber.

Come Round Right at Last—The Tribune on Premiums.—Years ago, the Publisher of the *Agriculturist* acted upon the idea that it would be just, and more pleasing all round, to offer pay, in the form of good articles, to those who took the no small trouble of getting up and forwarding large lists of names, instead of making begging appeals to them, to "work for the good of the cause." He also thought to do a good work for the country by sending out new or desirable seeds for propagation and a wider diffusion. But what a hue and cry was made! "Humbug" was the quite common slur of the press. We remember the Tribune gently hinted that the *Agriculturist* was not intrinsically worth the price asked for it, but needed a little of something else "thrown in" to make it worth a dollar a year.—But what a change! Now, nearly all enterprising journals, religious, scientific, agricultural, news, etc., are offering premiums (pay) to canvassers. Many of them have "stolen our thunder," and doubled it; and, tell it not in Gotham, even the Tribune has come round right at last, for it now pays agents for services rendered, by supplying them with writing apparatus (pens.) Very good, Mr. Tribune. Now, having had more experience than you, let us advise you to add some white paper and a bottle of ink, and then you will do some good seeds as we do, to complete your agricultural department, and you will make your paper, *with the extras*, worth its price . . . . (Are we "square" now, Mr. Tribune?)

Hogs—Cost of Bringing to N. Y.—Jan. 9, Messrs. Zeublin & Hardy, of Pendleton, Madison Co., Ind., (28 miles Northeast of Indianapolis, on the Belfontaine Railroad,) shipped 465 live hogs on that road. The average weight was 261 lbs., and they occupied 8 single-decked cars. The lighter hogs went 65 to 68, the heavier ones 51 to 53 to the car. The cars were forwarded to Buffalo, taking the Columbus and Cleveland road at Galion. The freight from Pendleton, Ind., to Buffalo, was $72 a car, which included return passes for three men accompanying the hogs. Average freight per hog, $1.24 to Buffalo. Time to Buffalo, 60 hours. Two hogs died and were sold at Buffalo to 1¾ cents per lb. Cost of feed and hotel bills, during 2 days detention at Buffalo, $25.—From Buffalo to New-York, by Central and Hudson River Railroads, five double decked cars were required. Time through, about 40 hours. Freight through, 47¾ cents per 100 lbs. They were called 108,616 lbs., and the freight $515.92, or $1.11 per hog. Free passes were given to the three men while with the hogs, but no free passes to return to Buffalo. Whole cost from home for 465 hogs, $1,116.92, or $2.40 per hog—a trifle less than one cent per pound, on home weight. To this is to be added in New-York, 3 cents each for yardage, 1 cent each for weighing, cost of the feed, and 1¾ per cent commission for selling. The shrinkage will be about 90 lbs. per hog, or 8 lbs. to the cwt. These were larger than the average run of hogs, making the freight a little higher for each.

Farmers' Tricks of Trade.—The following from a correspondent needs no comment: "Of two Long Island farmers, one warmly contended that *custom* sanctioned putting the largest and finest potatoes, apples, pears, peaches, etc., on top of the basket or barrel, for if this is not done, they bring lower prices. The other, who was more conscientious, said he could not do it, notwithstanding custom sanctioned it, and he was aware that he got less for his fruit and vegetables than his neighbor did. As a buyer for family use, I listened attentively, and regretted to find that the majority of buyers, or market men, at least, are thus paid a premium for what I should term deception, if not dishonesty. For a long time I have observed this tendency to make the finest show upon the outside; and when I wish to buy a basket of apples or peaches, I have to ask the dealer to pour them out, to see how the bottom compares with the top. What says the *Agriculturist* to so glaring an evil? Shall we not rather encourage uprightness in the dealings, than countenance deception in any way? I know of parties who have bought what they supposed to be fine baskets of fruit, judging from the outside appearance, and finding them so very inferior generally, they have resolved never to deal with such sellers again. As it now is, a person is certainly liable to be deceived, unless he overhauls every package of fruit or vegetables coming to market. As far as one purchaser is concerned, I am resolved to purchase of such persons as the conscientious dealer referred to, when I can thus encourage honesty rather than duplicity."

Cotton Speculation in England.—It is stated in English papers that almost every body in that country is infected with the mania for speculating in Cotton. Clergymen, doctors, lawyers, and even ladies are investing, in hopes of speedy fortunes. The effect will be *bale*-ful, when the bubble bursts.

Vermont Farm Scene Wanted.—Honestus Stearns, Windsor Co., Vt.—Good. We endorse your criticisms on the November *Agriculturist*. Can't you give us a real genuine Vermont Scene?—a picture of one we mean.

The Parlor Gardener.—A very neat concise little book, on the House Culture of Ornamental Plants, full of suggestions, in the main reliable, and expressed in a playful style. Translated from the French and adapted to American use, by Cornelia J. Randolph, of Virginia. Published by J. E. Tilton & Co. There are several fine cuts of table ornaments, in the plant line, and the book is well worth the price (65 cents). Sent post-paid.

To Onion Growers.—We have a neat pamphlet of 32 pages, containing the condensed but plain directions given by *Seventeen practical Onion Growers*, residing in different parts of the country: and embracing full directions for every item of labor, from selecting seed and preparing ground, to harvesting and marketing crop. Nowhere else can so full, complete, and useful information on this subject be found. Sent post-paid on receipt of 21 cents (or seven 3-cent stamps). Address the Publisher of *American Agriculturist*.

Of Stationery, Blank Books, etc., Francis & Loutrell, No. 45 Maiden-lane, manufacture a large assortment. We acknowledge the receipt of a very fine Pocket Memorandum and Daily Diary for 1862, which we are turning to practical *account*, daily.

Books on Trees and Shrubs.—W. H. Baker, Racine Co., Wis.—Meehan's Hand Book of Ornamental Trees (75c.) is the best American work, for a cheap popular book giving descriptions and methods of propagating, condensed in a small compass.

Iowa College Farm.—Nearly the whole of the $10,000 appropriated by the Legislature of Iowa for agricultural purposes, was expended in the purchase of a farm, in the erection of farm buildings, and in setting out trees and otherwise commencing farm operations. An Iowa correspondent of the *Agriculturist* says, that little or nothing is now doing, but that the college farm interests are secured against loss, and will probably so remain till peace returns.—A wise arrangement.

American Pomological Society.—Ninth Biennial Meeting, at Boston, Sept. 17th, 1862. We learn by a note from the President, Hon. Marshall P. Wilder, that the next meeting of this association will open as above. Previous meetings have been held at New-York, Boston, Philadelphia, Cincinnati, and Rochester. This is the only National Society, devoted to horticulture or agriculture, which has deserved and enjoyed a successful career. It has eschewed all financial speculations, and money raising dodges, and thus kept free from a class of harpies who invariably attach them selves to every national enterprise, when there is and money to be made, and if not shaken off bring it to disgrace if not ruin. The friendly meeting of fruit lovers, for a calm discussion of the real merits and demerits of the different varieties of fruits, is productive of good to themselves and to the country at large. We can but hope that before next September, our National troubles will be so far settled that, as in the past, the Pomological Meeting will be a *National* one.—The Massachusetts Horticultural Society has ordered its Annual Exhibition for the same week.

Conn. Grape Growers' Association.—The Annual Meeting was held at Hartford, Jan. 7th. The election was deferred to an adjourned meeting to be called by the Executive Committee. Present officers: *President*, D. S. Cheever, Bridgeport; *Vice Presidents*, S. Middlebrook, Bridgeport, and E. A. Holcomb, Granby; *Secretary*, Mason C. Weld, (now) N. Y. City.; *Treas.* W. H. Risley, Berlin.

The Kentucky Agr. Society.—Held its annual meeting early in Dec., and re-elected Col. L. J. Bradford, of Bracken Co., for President, and chose for *Vice Presidents*—P. Swigert, Franklin Co., 1st District, J. B. O'Bannon, Jefferson Co., 2d Dist.; Jno. G. Holloway, 3d Dist., with 5 directors for each district. The President in his address stated that the Annual Tobacco Fair at Louisville, had added (annually?) $2,000,000, to the value of that staple in that State.

Conn. State Agr. Society.—At the Annual Meeting, at Hartford, Jan. 8th., the following officers were elected for 1862: *President*, E. H. Hyde, of Stafford; *Vice Presidents*, R. Battell, of Norfolk, and D. F. Gulliver, of Norwich Town; *Cor. Sec.* Henry A. Dyer, of Brooklyn, Windham Co.; *Rec. Sec.* T. S. Gold, of West Cornwall; *Treas.* P. A. Brown, Hartford; *Chemist*, Prof. S. W. Johnson, Yale College, New-Haven; *Directors*, (appointed by Society, one for each County).—Chas. M. Pond, Hartford; Randolph Lindsley, New-Haven; James A. Bill, New-London; E. Hough, Fairfield; Levi Cowles, Middlesex; Lemuel Hurlburt, Litchfield; Benj. Sumner, Windham; R. B. Chamberlin, Tolland. *Directors* (appointed by County Societies)—J. A. Hemmenway, Hartford; N. A. Bacon, New-Haven; Henry Bill, New-London; G. W. Seymour, Litchfield; Ezra Dean, Windham; Stephen Hoyt, Fairfield; J. S. Yeomans, Tolland; no one yet nominated from Middlesex.

New-York Breadstuffs Trade, Meat Trade, etc., for 1861.

We hardly need call attention to the condensed, but very complete tables in our Market Review on pages 58 and 59. They have been prepared for the *American Agriculturist*, with much labor and great care, and our readers will be able not only to see at a glance, the trade of the year just past, but also to compare this trade with that of the previous two years. These figures explain the improved condition and feeling of the country, even in the midst of war. The prices of farm produce, in the Western market towns, have not been high, as compared with a few years ago, yet the amount of money sent westward for produce, in the year 1861, was enormous, as compared with previous years. Let us look at table **3** (page 59), showing the receipts at New-York for each of three years, and see what amount has been paid to producers for Breadstuffs, through the direct channels of trade. (The receipts are only those coming through regular channels, and recorded. Large amounts, purchased to arrive, have gone directly to receivers, without any record being made; and much has come in by transient routes.) The prices used in the following estimates are the average of all sales made throughout the year.

RECEIPTS AT NEW-YORK FOR **1861.**

Kind.	*Amount.*	*Average Price.*	*Value.*
Wheat Flour	4,968,971 bbls.	at $5.40.....	$26,832,443
Wheat.....	28,429,125 bush.	at 1.35.....	38,379,318
Corn	20,726,166 bush.,	at 60.....	12,435,699
Corn Meal..	98,519 bbls.,	at 3.06.....	301,468
Rye	775,665 bush.,	at 72.....	561,478
Barley.....	1,854,394 bush.,	at 68.....	1,260,926
Oats	4,852,009 bush.,	at 36.....	1,746,723
Total for Flour and Grain.....			$81,518,055
To this let us add the amount paid for Live Stock, as given on page 58,)			.....$22,485,816
Total for Breadstuffs and Live Stock...			**$104,003,871**

This is without taking into account the irregular receipts of Grain, Live Stock, etc., nor does it include salt meats, poultry, lard, butter, cheese, eggs, potatoes, fruit, wool, hay, hops, seeds, tobacco, etc., etc., received at this single market, tables of which would fill a large volume.

Range of Prices in 1861.—For future reference, we have prepared the following table of the New-York prices of leading articles, on the 20th of each month during 1861. For the *average* of the whole market at any time, we may take: for *Flour*, the highest quotations of "Extra State"; for *Wheat*, the highest quotations of "All kinds of Red"; for *Corn*, the highest quotations of "Mixed"; for *Oats*, the highest quotations of "Western."—The average prices used above for flour, wheat, and rye, are higher than in the table below, because more of these three articles were sold at the higher than at the lower monthly figures.

NEW-YORK PRICES, ON THE 20TH OF EACH MONTH.

1861.	*Flour.* $ c.	*Rye Flour.* $ c.	*Corn Meal.* $ c.	*Wheat* $ c.	*Corn* c.	*Oats.* c.	*Rye.* c.	*Barley.* c.
Jan..	5 55	3 72	3 35	1 38	71	37	74	72
Feb.	5 50	3 71	3 30	1 35	68	37	67	74
Mar'h	5 45	3 70	3 02	1 35	68	33½	64	72
April.	5 40	3 70	2 97	1 40	68	35	68	67
May..	4 35	3 50	3 00	1 32	53	32	67	61
June.	4 95	4 50	2 97	1 30	45	31	68	57
July..	4 50	3 90	2 91	1 12	50	31	67	57
Aug..	4 50	3 90	2 95	1 30	50	33½	60	—
Sept.	5 45	2 90	3 05	1 30	56	35½	69	70
Oct..	5 80	3 40	3 00	1 26	61	39	74	65
Nov..	6 00	3 75	3 07	1 44	67	47	83	76
Dec	5 85	3 80	3 30	1 43	67	43½	84	73
Avge.	$5 30	$3 46	$3 06	$1 37	60	36	70	68

In looking at the prices given above, the first suggestion perhaps will be, that these are far above those received by producers. But these prices have been paid here, and all the money paid has gone *towards*, and *into* the country—some to laborers on the lines of transportation, and some to dealers, all of whom live in the country or in interior towns, and spend the proceeds of their labor there. The main point we aim at is, to show how much has gone to the country from this single City. Much of the amount paid for Breadstuffs has come to us again from over the ocean, either in return cash, or in cancelled debts owned to foreign countries, and by so much has this country been enriched.

The Tables in the Review are interesting also in the comparison they give with other years. Thus, the receipts of Wheat in 1861 were over twenty-eight million bushels; in 1859 they were less than four millions. Receipts of Corn in 1861 were over twenty millions, in 1859 less than four millions. So of Wheat Flour and of Rye.

The prospects for the future seem to be encouraging. We stated last month Dec. 20, (which by mistake was printed Oct. 20,) that we did not believe there would be war with England. The prediction has, happily, been confirmed. There is no present prospect that the outlet to our farm produce, to the hungry foreign markets, will be interrupted. All the Breadstuffs we can spare will doubtless be wanted before the next European harvest, and the avails will add so much more to the actual wealth of this country.

Sandwich Island Agriculture—Interesting Items.

A subscriber (Joel Bean, a Missionary of the Society of Friends,) at Honolulu, the chief city of Oahu, and the capital of the Sandwich Islands, in a recent letter to the *American Agriculturist*, gives the following interesting items: The only land suitable for cultivation on these Islands is the narrow border, varying in width from one to ten miles, between the mountains and the sea shore. Most of this is at present pasture land, and plentifully stocked with cattle and horses, and some sheep and goats. It is said that on the Island of Oahu, there are as many horses as people. This almost universal grazing of the land, increases its parched appearance during the dry summer months, and in some places the rains have sensibly diminished, since the cultivation of the ground ceased. The stranger is struck with the very small proportion of land under tillage, and wonders how the people are fed. But the native population subsist principaly on *Taro*, of which their little patches are to be seen around every village. This plant yields abundance of food. [The *Taro* is a plant of the genus *arum*, having leaves like the water lily, and large, thick, oblong roots, which are baked and used as food.—ED.] A little corn is raised, together with Irish and sweet potatoes, melons, and small quantities of garden vegetables. On the island Mani, wheat is raised, and there are several large sugar plantations. But wheat is an uncertain crop, on account of worms, and a portion of the cane which requires in some localities two years to mature, is now quite ruined by the drouth. The present neglect of agriculture has grown out of a dependence on the whale shipping, which a few years ago was a very great source of income, but since that business has diminished to a great extent, those in authority and others interested in the prosperity of the Islands are being aroused to the necessity of developing their own resources. Hence, strenuous efforts are now being made to introduce cotton growing on a large scale, and to interest the natives in its culture.—But little of the land is fenced or under cultivation. The principal material for fencing is stone; in some places wire is used; and now and then a lot is enclosed by a hedge of prickly pear. The cultivated fruits are: bananas, papia, figs, grapes, etc. The wild fruits are ohias (native apples), ohelos (a kind of huckleberry), pohas, strawberries, bread-fruit, guavas, and some oranges in the mountains, but none of these fruits are abundant, except bananas, which are of more general production than any of the others.

Farmers be Sociable.

The position and duties of farmers somewhat hinder their sociability. Scattered over the hills and valleys of the country, often miles apart, and engaged in solitary field labor, day after day, and month after month, it is not so easy to keep up much intercourse with general society. Mechanics, merchants, manufacturers, and professional men, naturally concentrate in cities and villages, where they can enjoy a daily exchange of opinion and information, and pleasant courtesies. This stimulates thought, awakens ambition for improvement, and adds much to the general happiness of life. The longer farmers live in a solitary way, the less likely are they to change their habits. It is not surprising that in many cases they become stiff and awkward in their manners, dull in intellect, and ungenial, if not morose in feeling.

But we are not, on this account, going to depreciate the farmer's lot: it is, in many respects, the best under the sun. Yet it can not be denied that evils lie in the direction we have indicated; *and they should be guarded against.* It is not a good thing for anybody to make a slave of himself: to jog around as in a treadmill, year after year, with little or no relief, or rational enjoyment, and the farmer should not follow his work too doggedly. We would not have him drudge so hard that he can not enjoy the society of his family every day. He ought to be the leader and benefactor of his household in their social intercourse. His conversation at the table, and around the evening lamp, should be instructive and elevating to sons and daughters. His genial hospitality should attract neighbors and friends to visit him often and enliven the converse of the fireside. And he, with his family, should systematically keep up acquaintance with other good families, far and near.

The Farmers' Clubs, which are established in many districts, exert a good social influence so far as they go, but they are not enough; the intercourse of families should be superadded, as this contributes very much to the enjoyment and respectability of agricultural life. It lightens the burden of daily toil, relieves its solitariness, awakens thought, and promotes general improvement. Where this is done, farmers' children, both sons and daughters, will be less inclined to long after the excitements and gayeties of town life, and more of them will be content with the calling in which they were born.

Apple Juice for Dyeing.

According to English Journals, the discovery has been made by Manchester dyers and calico printers, that apple juice is just what has long been wanted for making fast colors of some descriptions on printed cottons. Numbers of them have been through the adjacent counties buying up the apple crops which have heretofore been used for cider, at advanced prices, and a scarcity of the latter article is apprehended. Our own enterprising dyers and calico printers have already made the application and it is used as a substitute for argols and cream tartar in various processes. The state in which cider is of most value is hardly yet definitely ascertained—whether as new cider, hard cider, or vinegar.

POULTRY AND PORK.

Engraved for the American Agriculturist.

Our artist has sketched a picture not uncommon among American farm scenes. No farm establishment would be complete without its poultry yard, and its piggery. The frugal housewife well knows the advantage of a basket of eggs for the Store, to be returned in a few yards of muslin or calico, a spool or two of thread, a packet of tea, and sundry other "notions." She has received many six-pences and shillings of "pin-money" from the peripatetic chicken merchant. She fully appreciates the convenience of plenty of fowls in the roost, always ready to be drawn upon for an extra dish, when an unexpected friend arrives. Her poultry are therefore sure to receive their regular rations, whether the vegetable and flower garden be neglected or not. The artist has introduced into the back-ground the never absent trough and feeding porkers. The two objects suggest the inquiry, which *pays* the best, poultry or pork? Much may be said on both sides of the question, but as a rule we should decide in favor of poultry, notwithstanding the argument, considered as unanswerable, viz.: that the pigs will consume and turn to profitable account a large amount of garoage that no other animal will eat. This is an error. Barn-yard fowls will devour almost every species of garbage that the porkers will not turn up their noses at—*salt* kitchen slops excepted. The only serious objection to poultry is, that they do not flourish well when kept together in large numbers. But this objection is without force on most farms where only a hundred fowls, or so, are kept, and around the thousands of smaller homesteads, where a pig is considered necessary as a scavenger. It seems not to be understood that fowls are preferable for the same purpose. We will let a subscriber speak. Here is part of a letter just at hand from J. C. Thompson, of Staten Island:

"Most families in the country, and on the outskirts of cities, think they must keep one or more pigs, to use up the offal of the family—or because it is the 'custom of the country.' Having tried pigs, and become disgusted with the trouble, labor, expense, filth and noise—to say nothing of the inferiority of pork to eggs and poultry—I abandoned the former for the latter; the result has been quite satisfactory, and after several years trial, I feel confident the advantage is decidedly in favor of poultry. Here is my last year's account:—January 1, 1861, stock on hand, 70 fowls, of which fifteen died during the winter, from unknown causes, leaving me 52 laying hens. From these I obtained in January, 409 eggs; in February, 439; in March, 681; in April, 959; in May, 835; in June, 801; in July, 719; in August, 603; in September, 421; in October, 332; in November, 286; and in December, 440. Total, from 52 hens, 6,925 eggs—equivalent, in bulk, to seven barrels, as a barrel packed for market contains just about 1,000 eggs. About 8 eggs from the Leghorn or Black Spanish breeds, weigh a pound. My 6,925 eggs therefore weighed 865 pounds. Allowing the hens to weigh 5 pounds apiece, they each laid, on the average, *three times* their weight in eggs alone. As they hatched full a hundred chicks, the weight of which, when ready for the table, must have been 1½ pounds each, the whole amount of food produced was over a thousand pounds, notwithstanding I killed off part of the old stock in June, July, and August, depending on the Spring-hatched chicks, which began to lay in August, to keep up a supply of eggs and replace those killed off. When we consider the amount of food (of the very best kind) produced in one year, from so small a stock to start on, and then, too, the stock left *whole* at the end of the year—the advantage of poultry over pigs can be seen at a glance.

To produce 1,000 pounds of pork, will require a vast amount of labor, a vast quantity of food, and any quantity of noise—giving fresh food for only a short time, and salt food for the balance of the year—and the stock not left whole to start on again, as in the case of poultry. The product in eggs was more than 6,925, perhaps over 7,000, as I detected a boy that had access to the hen-house for some time, in stealing them. The number named was actually collected. My stock is principally Leghorn; and it now costs $3 per month to feed 75 head. As some may desire to know *how* the hens are managed, I send a brief description." [We will try to find room next month for the details of Mr. T.'s practice; it is well to know first *what* is done, but the *how* is not less important.—Ed.]

Maple Sugar.

The maple sugar season is just upon us. Always important as it is, this year it is more so than ever. The high price of cane-sugar makes it a costly luxury, to be indulged in sparingly. Moreover, it will do us northerners no harm to be thrown a little more upon our own resources. With the maple-trees and the sorghum plant, we shall get along quite comfortably.

The "sugar-bush" should always be securely fenced in; it is a great annoyance to have one's buckets visited by roving cattle during the night. The apparatus used *may* be of the rudest kind—the "buckets" mere blocks of wood dug out with an ax, the sap boiled down in kettles hung on a cross-bar in the open woods—but then, the molasses and sugar will be rude, too. We can easily do better than that.

First—the conveniences for boiling down. Build an "arch"* of brick and mortar, in size corresponding to the extent of the bush. On this, large pans are to be set for evaporating. Two or three cross-bars of iron are to be laid across the opening, to prevent the pans from sagging down. The pans should stand exactly level. Any tinner can make the pans, using Russia iron, two sheets riveted together with sides 5 or 6 inches deep turned over ¾ wire, and provided with handles. When more than one pan is used they should be set on the same arch, each as much as its own depth higher than the other, so that the sap can be drawn, if desired, through faucets, from the highest into the lowest. If this arch is under a large shed, it will contribute much to the comfort and cleanliness of the work. Provide good dry wood.

For tapping the trees, use an auger ⅞ to ¾ inch size, and bore holes from an inch to one and a half inches deep, merely cutting through the bark and sap-wood. A deeper hole strikes into the heart-wood and begets decay. By tapping three or four feet above the ground, the sap is kept quite free from flying leaves and dirt.

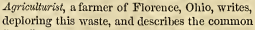
Various kinds of spouts are used. Those made of tin or sheet iron are in high favor with some. They are about two inches wide and six inches long, rounded up eaves-trough fashion, and one end sharpened with a file, or on a grindstone. It is then driven into the bark just below the auger-hole, using a wooden mallet for driving, to avoid battering it. Others prefer wooden spouts, made of pine or hard wood.

Buckets are sometimes made of tin, others of pine, and others of cedar, the wooden ones being hooped with iron or ash, and painted. These are suspended either on the end of the spout (bad practice), or upon a large nail or hook driven into the tree.

For collecting sap, some still practice carrying the buckets by hand to the kettles or pans; some conduct it by shallow troughs to a large reservoir at the center of the bush. Others collect the sap by pailfuls; in a cask or vat drawn upon a sled or stone-boat.

Sugaring Off.—This is an easy process. When the sap is boiled down to a syrup, strain it through a clean flannel strainer into a medium sized cauldron, and boil it until it granulates. If leaves, pieces of bark, ashes, flies, or dirt of any kind has fallen into the sap, it must be clarified. This can be done by using milk, or saleratus and the whites of eggs. A good recipe is a half tea-cup of new milk to every pailful of syrup. Then boil slowly and stir well together, skimming off the scum which will soon rise to the surface. This done, and the syrup being found "dry" enough (by testing a little in a saucer) to make into forms, pour it into tin molds of any convenient size or form, and when solid, lay the cakes upside down to prevent premature draining. At the first leisure moment, lay the cakes on their edges with dishes underneath to catch the drainings. The cakes will soon harden.

A practice of tapping maples with the ax, hatchet and gouge, is in some sections alarmingly prevalent. It is certain ruin to any maple grove, and the price of sugar at the present time should convince farmers of the great value of a good sugar bush. In a recent letter to the *Agriculturist*, a farmer of Florence, Ohio, writes, deploring this waste, and describes the common "tap" used by himself and others. Here is a drawing of the simple implement, with his description: "Take first quality, straight grained, inch pine boards, cut them in foot lengths, and



split them up into one inch square pieces. Two inches from one end saw half-way through, and split off the ten-inch piece. Bore a quarter inch hole into the larger end, lengthways of the tap, and cut a groove from the hole to the other end. In the absence of a vise, to hold the stick to prevent splitting, burn the hole out with a hot iron. To fit them, bore a ½ inch hole in a hard wood block, and whittle down the square ends of the taps, just to fit, but not to enter it. When driven into the trees, they should hold fast when inserted an eighth to a quarter inch only; if driven in deeper, they cut off, in part, the flow of sap.

It is a good practice to deepen the holes in the trees by several successive borings during the sap season, in order thus to clear out the mold, and keep the holes sweet and pure; but never sink a hole deeper than two inches; no increased flow of sap is gained. A three-quarter inch hole will often close up almost entirely in one season.

*An "arch" in sugar-boiler's phrase means simply brick or stone-work to support boilers, kettles or pans.

A Talk About Sorghum, or Chinese Sugar Cane—Interesting and Instructive Details of Experience.

The present high price of sugar, with the prospect of a further advance, very naturally awakens increasing interest in the cultivation of the Sorghum, or Chinese Sugar Cane plant, in the North. Very many letters of inquiry are continually coming to this office, and we shall gladly give any information we can gather and communicate. Thousands of acres were grown during 1861, and manufactured into good palatable sweetening. The crop will doubtless be increased to tens, if not hundreds of thousands of acres, the present year. It seems to be settled beyond doubt, that this plant can be profitably grown in the United States below 41° north latitude, and probably even north of 42° or 43°, in favorable situations. We shall be glad to hear from all who have tried it thoroughly (whether successfully or not,) north of 43°. Perhaps we can not do better in this number than to print some memoranda or notes taken down by one of the Editors of the *American Agriculturist*, during a recent lengthy conversation with Mr. E. A. VanMeter, who has had considerable experience, both as a cultivator, and in working it up in large quantities, for his neighbors, in Washington, Tazewell County, Ill., (lat. 40° 30'.) We have samples of the syrup produced, which are of excellent quality, and which need no purifying for ordinary table or culinary use. It is indeed free from the green or sharp taste which is so common.

MR. VAN METER'S EXPERIENCE AND OPINIONS.

The plant does well upon any good corn land, and the expense of cultivating the two crops, aside from the cost of the seed, which is inconsiderable, is the same. A rather light soil—sandy loam—other things being equal, produces juice of the greatest richness. In regard to seed, it is of the utmost importance to have pure Chinese Sugar Cane. The Imphee, in his experience, is three weeks later, and produces syrup of by no means so good quality, and less in quantity. The admixture of broom corn seed is not infrequent, and is fatal to a good crop, there being little or no sweetness in the stalks. Sorghum may be planted in hills three and a-half feet apart each way, or in drills the same distance apart—the plants standing singly eighteen inches to two feet apart, and the suckers allowed to grow. If planted in hills, five stalks are left in each, and the suckers thoroughly removed. He decidedly prefers planting in drills, and thinks that this has much to do with the good results of the crop. The seed should be planted as early as the ground can be prepared, and is fit for its reception—earlier than corn. The practice of a neighbor is to sow in an early seed bed, and transplant to the field, setting the plants two feet apart in rows, and the rows three and a-half to four feet apart. This man's syrup crystalized so readily that he was obliged to make it all into sugar, and was unable to take even a sample of his molasses to the County Fair. It is the largest, best grown, and best matured stalks that yield the most and best syrup. Some juice yields seventeen per cent. of good thick syrup, and others only ten per cent.

The crop is treated like corn until it begins to ripen, which may be known by the cane turning yellow upon the joints towards the buts, and by the blackness of the seeds. At this period it should be "bladed," or stripped of its leaves, to facilitate perfect ripening. To effect the "blading," take a hickory stick, one-and-a-half to two inches in diameter and three feet long, slip on a rug, or bind it strongly within fourteen inches of the end; split this end in the middle, and spread the ends two inches apart, by a wedge in the split. This saves a great amount of labor—a single blow usually blading a stalk, and often more than one, perfectly. The blades thus removed are considered equal to corn fodder, not having been touched by the frost, and are easily cured. The bladed stalks stand after this two weeks or more, unless danger of frost makes it necessary to cut them sooner. Freezing is ruinous to the cane, giving a peculiar flavor to the syrup, and causing fermentation in the cane itself, unless pressed immediately. It must, therefore, be cut before any hard frosts—though light frosts, which wither the leaves, do no hurt.

When fully ripe, the cane should be cut, which operation is thus performed: Using a corn knife, strike off about three feet of the top as it stands (the length to be cut off will vary somewhat, according to the size and maturity of the cane). Then cut the cane off about eight inches from the ground, or at least above the first joint, and lay in piles or on the wagon. There will usually be suckers enough to bind the cane in bundles if it is desirable, or if it is to be hauled far. After the removal of the stalks, the seed may be collected, or fed to hogs or poultry on the ground. The canes are taken direct-

ly to the mill, or set up or laid in piles, and protected against frost by covering them with the tops, or with hay or straw,—in which condition they will keep for months.

The mill used was Hedges, Free & Co.'s two-horse mill—a good one—consisting of three rollers thirteen inches long, the largest and upper one eight inches, the others four inches in diameter; both small rollers act against the large one. From eight to thirteen canes are kept passing through the mill at once, and as the juice flows out it is conducted to the "clarifier," being as liquid as water, and of a dark grass-green color. (Implice juice is of a dark, muddy hue.) In the clarifying pan it is mixed with Root's patent "clarifyers," (a mixture of lime, soda and eggs.) After clarifying, the juice is boiled and skimmed for fifteen minutes. From this it is drawn off into the settling box, where, mixed with clay, it stands to settle, and after fifteen or twenty minutes, may be drawn off clear and limpid, into a convenient vessel, whence it is pumped up into the evaporator.

Cook's evaporator is used, in which the fire plays under an inclined pan, down which the juice is made to run, following a zig-zag course, running faster or slower, according to the inclination of the pan, or the rapidity at which it is allowed to flow in or out. Water is placed in the evaporator to begin with, and in twenty to twenty-five minutes after the juice begins to flow in at one end syrup begins to flow out at the other. By the exercise of a little care, there is no danger of burning the syrup; but the care must be constant. A uniform product is most desirable. The syrup should not be too thick, for it will not flow readily from the barrels if it is so, and this great degree of concentration is not necessary to prevent souring. The mill runs about sixty gallons an hour, and sixty gallons is a charge for the clarifier, and so about this quantity was worked at one time.

Mr. Van Meter made syrup for half the product, and found ready sale for his portion at the mill, as fast as it was made, at fifty cents per gallon, and had no end of orders which could not be filled.

One hundred gallons to the acre was about an average yield last year for land adjoining corn which yielded fifty bushels to the acre. The Sorghum syrup, at fifty cents per gallon, half going to the boiler, nets the farmer $25; while corn only sold for fifteen cents per bushel, netting $7.50 per acre.

For ourselves, we entertain no doubt that the boiler's profit will be found too great by and by, and so a still larger profit will accrue to the farmer. We have reports of crops yielding from 100 gallons to 350, or even more, per acre.

P. S.—A Sorghum Convention.—As we close this sheet, we have from a special correspondent, a report of the meeting of Sorghum Growers, at Columbus, Ohio, Jan. 7, but cannot now find room for it. They appear to have had a good time, with their fifteen samples of beautiful Sorghum sugar, and "Sorghum syrup enough to float a [very] small frigate." Many reported having made 10 to 100 pounds each of sugar last year. Most, if not all, had used Cook's rocking Evaporator. There was considerable information brought out during the discussions and relations of experience. These referred more to harvesting and manufacturing than to planting, and will be in season hereafter. One point stated is important, viz.: that most of the seed now in the country is hybridized with broom corn, and is therefore deteriorated, making a new importation of seed desirable.

Tim Bunker on the Value of Muck.

"Ha'int you got most tired on't, squire?" asked Ben. Jones, as I carted along my twentieth load of muck last night.

"Guess not. Why?" I replied.

"It's a mighty deal of hard work for nothing. I'd just as leeves have so many loads of snow banks in a barn yard."

"It's all moonshine about there's bein any vartu in muck. I'd jest as soon dung a field with icicles," chimed in George Washington Tucker, who gets his ideas and his drinks from Jones.

"Them's my sentiments exactly," said Jake Frink, as he met us in the road with a load of oats in bags, going down to Shadtown to market. "You see I was over persuaded one year, when the Squire bo't the hoss-pond lot, to try some of the mud that come out of the side of the road, where the pond used to be. I guess I carted a dozen load, and thought I was going to see corn stalks as big as your wrist, and ears as long as a hoe-handle. And I du declare I never could see a bit a difference where I used it."

"How much manure did you put on to the acre?" inquired Seth Twiggs as he drew a lucifer across the top of his boot, and lighted his inevitable pipe.

"Wall I made a whoppin sight that year, and slapped her on ten loads to the acre."

"Corn must 'av been skeer'd at such duin's I guess," said Seth with a twinkle in his eye that the cloud of smoke could not hide.

"Corn didn't come up well did it?" asked Seth, pursuing his catechising.

"Wall, yes, it came up, but looked mighty yaller, and didn't begin to grow much till into June, and then it was spindlin, and a great many stalks didn't have any years on 'em. It was that cold frog mud that pizened the sile."

"How much corn du you git to the acre, take it by and large, Mr. Frink?" asked Seth civilly.

"I guess about twenty bushels, on an average, some times a leetle more—and some times less."

"And how much manure do you put on to the acre?" contined Seth determined to get to the bottom of the matter.

"Wall that is jest as it happens. I allers put on all I make, be it more or less, p'raps fifty or sixty loads on to eight or nine acres of plantin. It's real dung, though, and none of your bog moss, and stuff."

"And how do you suppose Squire Bunker gits eighty bushels of corn to the acre?"

"Wall, his land allers was better than mine; and then he has more cattle to make more manure, and he buys lots of guanner and bone dust, and all the ashes folks makes in the village, and sets every boy that's big enough to run on tew legs to pickin up bones, and buys every ded hoss and rotten sheep, and murdered cat, shoe maker's parin's, old boots, ded hens, old rags, and feathers, sticks 'em into this muck, and makes manure. If a man has money 'nuff to buy carrion, he can make manure and make crops, but ye see it costs more than it comes to. And then, who wants to be runnin an opposition line to the crows! The Squire is great on dead hosses, depend on't. The crows haven't had a decent meal of vittles the last five years, the Squire's been so spry after every ded critter."

Jake Frink touched up his nag and disappeared rather suddenly after this display of his philosophy of big crops. There was, of course, some foundation in truth for his reflection upon *my* methods of making manure. But neighbor Frink displayed his own pride, as well as my humiliation, in his remarks. One would hardly think it. But Jake Frink is really above his business, and is ashamed to do what ought to be done, to make the most of the materials with in his reach to enrich his stores of manure. You see this digging muck is nasty business. You must soil your boots, and your shirt sleeves, and a splash of mud upon your shirt bosom is not uncommon. And the handling of dead horses and other diseased animals is not particularly savory. But then if a man's going to be a farmer, he musn't faint at the sight of such things, or carry a smelling bottle to keep down the stenches. Muck makes *clean* corn, yellow as gold, and the sweetest of meals, and all offal and putrid flesh in the laboratory of the soil is turned into luxuriant grass, which makes nice milk, cheese, and butter, and a plenty of it. Being a farmer, and "nothing else", as the boys say, I go in for muck and more of it every year.

You gentlemen that edit agricultural papers, attend the fairs and see almost nobody but the best farmers, who carry out your teachings, think the world is almost converted to your faith. You have been preaching about muck for a dozen years or more, and you may think that every body understands it and every body uses it, and as much as they ought to. You never made a greater mistake in the world. I tell you the millenium hasn't come yet by a long shot. I guess one half the farmers in these parts to-day, have got Jake Frink's notion about muck, and it rests upon just his sort of trial, a single experiment based on an application of ten loads of half made compost to the acre. No wonder muck is considered poor stuff.

Now I am ready to give a reason for the faith that is in me. On my old land I can not make any money at farming without manure, and carting muck is the cheapest way I can make it. Indeed I should not know what to do without swamp muck. Manure, as it is sold in towns and villages in the Northern States brings from two to three dollars a *cord* of 108 bushels. As it *brings* this price it is to be presumed that it is worth this to the cultivators who buy it. These are generally market gardeners and farmers who live within four or five miles of market. If manure is worth this to the farmer who has to cart it several miles, it is certainly worth as much, or more, to the farmer who makes it and uses it upon his own farm.

Now I claim for the muck and peat that I use, that I make a dollar upon every cord that passes through my yard and stables on its way to the plowed fields where it is turned under—reckoning its value at the lowest market price, two dollars a cord. The peat as it lies in the bed yielding no income, is entirely worthless. It can be dug and thrown upon the bank of the ditch for twenty five cents a cord. If it can lie a year, all the better, but this is not essential, as fresh stable manure will cure it without frost. It can be delivered in my yard for fifty cents a cord, but it would cost those who have to cart it half a mile or more, perhaps seventy five cents a cord, making a dollar. Dry muck in the process of mixing and curing during the Winter, would be certain to lose neither in weight nor volume. In the Spring it is worth two dollars a cord as it lies in the yard. In making compost I calculate to use about three loads of muck to one of stable manure. If I have animals enough to make a hundred cords with nothing but straw, I can make four hundred with muck.

On the muck that I am able to cure in the fields where I use it, I make a still larger profit, as I save once carting. This I cure with stable

manure that I buy from the village, and with fish, dead animals, guano, or with lime and ashes, taking care not to use these latter articles with the animal manures. If any body doubts about my estimate of muck let him come to Hookertown and see my corn bin and porkers, my root cellar and cows, and my hay mows and horse stables. Jake Frink despises a dead horse and invokes crows. I think the carcass worth a "V," and save it. There is as much difference in folks as in any thing.

Yours to command
TIMOTHY BUNKER, Esq.

Hookertown, Jan. 11th, 1862.

Carting Manure in Winter.

Farmers accomplish much more in the winter months than they formerly did. The custom of going into Winter quarters after Christmas has passed away upon many farms, to the mutual advantage of the owner of the soil, and of his laborers. The working force of the farm is continued through the whole season, and the management is so skillful that there is always something to be done that will pay. In the older States, manure making occupies a prominent place. Indeed it may be said to be the foundation of the new order of things, for without this, it would be impossible to furnish profitable employment in winter for the whole amount of labor needed in summer.

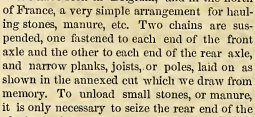
With this as the chief business, there is always work in rainy weather, in the barn cellar, or under the sheds, making compost; and the frosty weather when muck can not be dug, is improved to cart manure where it will be needed for the next season's operations. The idea that manure wastes when spread upon the surface of the meadow, or plowed field is exploded by these farmers. If the land lies level without danger of washing, they spread freely from October to May, without any apprehension of loss. The ammonia generated from the green manures is pretty well locked up in the muck with which it is mixed before it is started from the barn cellar or yards. The already fine compost is made still finer by the frosts of winter and is evenly distributed over the surface of meadows.

A very great advantage of using this season for carting, is the improved condition of the ground. The cart-way is as solid as a railroad, and almost as smooth, and a large part of the obstructions that impede the wheels is removed. The meadow is not cut up into ruts, or made rough by the hoof prints of cattle. It is much better to top dress meadows now, than to wait until Spring. It is also an advantage to cart out manure upon the fields which are to be plowed. The drawing is done more economically, it forwards the spring's work, and saves strength of team for plowing and other work that must be done in its season. JONATHAN.

How to Haul Stones and Manure.

The stone boat, or "drag," so generally used, is the most expensive method. The most that can be said in its favor is, that it is so simple in its structure that any body can make one after the planks are sawed, and that it is very convenient in loading and unloading the stones. But after the stones are loaded we want a team of elephants to draw them. It is severe on oxen by reason of the heavy strain it brings upon them. The friction upon the ground, unless covered with snow or ice, is immense. And if the ground is lubricated with frost it is a dangerous vehicle unless the surface is level, as it is very liable to run against the legs of the cattle. We have known of a fine yoke of oxen permanently disabled in this way. Stones should be moved upon wheels if we consult the welfare of our teams. A yoke of cattle will draw a ton upon broad tire wheels with about the same ease as they will draw one quarter of that weight upon a stone boat—a great saving of muscle.

For moving very large stones of five or six tuns weight, and putting them in place in a wall, there is nothing we have yet seen or heard of, quite equal to Bolles' Stone digger, (described and illustrated in the last December *Agriculturist*). But as this is somewhat expensive and not yet in general use, a very convenient carriage for stones is a platform suspended between the wheels of a wagon. The platform may be 10 to 12 feet long, and of the width of a wagon body. It may be made of strong plank, or joists, bolted or spiked upon cross-pieces. This is suspended by short stout chains from the fore and hind axles, down to within a foot of the ground, or less for a level surface. To facilitate turning, the forward end may have but one chain in the middle, which will allow the forward wheels to turn readily to the right or left. The platform may hang mainly upon the hind axle, in which case the rear may be nearly as wide as between the wheels, and the forward end run out nearly to a point. The wagon can then be turned round in a short space. The two chains on either end of the hind axle will prevent its tipping. The hind end can be tipped down to the ground for rolling on a very large stone, which can then be balanced by smaller stones thrown on in front. Such an apparatus is quickly constructed, without the aid of a mechanic, except getting the bolts from a blacksmith. Any strong wagon may be used, and much larger loads can be drawn, saving not only wear of team, but not unfrequently expense for blasting stones that could not be moved on a drag or stone-boat.

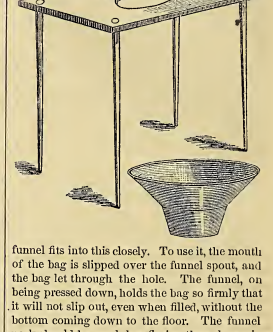


ANOTHER SIMPLE ARRANGEMENT.

We have seen in Belgium, and in the north of France, a very simple arrangement for hauling stones, manure, etc. Two chains are suspended, one fastened to each end of the front axle and the other to each end of the rear axle, and narrow planks, joists, or poles, laid on as shown in the annexed cut which we draw from memory. To unload small stones, or manure, it is only necessary to seize the rear end of the planks, which are pointed for this purpose, and lift them one by one, letting the load drop through. This plan saves lifting the whole mass of stones or manure up over the sides of a wagon. The hint is worth acting upon, and it is a wonder that we have not thought of describing it in the *Agriculturist* before now, or that some one else has not done so.

A Cheap Home-made Bag Holder.

Mr. Thomas Sheldon, of Hazardville, sends to the *Agriculturist* a description of a bag-holder of his own contrivance, which has been in use at the Hazard Powder Mills several years, for filling bags with saltpeter. It has at least the merit of being simple, easily and quickly made, and is unpatented. The accompanying sketch, made partly from the description, and partly from a penciling made by Mr. S., will show its form and operation. A board, say 14 by 24 inches, is fitted with legs of any desired length. These may be fastened like an ordinary table, or be merely rough sticks, fitted into auger holes, to be taken out at pleasure for packing away. In the center of the board a round hole is cut, say 10 inches in diameter. A tin or sheet-iron



funnel fits into this closely. To use it, the mouth of the bag is slipped over the funnel spout, and the bag let through the hole. The funnel, on being pressed down, holds the bag so firmly that it will not slip out, even when filled, without the bottom coming down to the floor. The funnel neck should be much less flaring than shown in the engraving, or it will not wedge in the bag so strongly. This would seem to be a good apparatus, costing but very little, and requiring no cash outlay, except for the funnel.

Is it the Glanders?

A young farmer writes us about a fine young horse of his, which has some symptoms of glanders, and wants to know what the real trouble is, and how to deal with it. His horse runs at the nose, has some soreness about the jaws, is feverish, loses gradually in flesh, and is disinclined to work.

These, indeed, are among the symptoms of glanders, but a horse may have them all without having the glanders. The *decisive* marks of this disease are as follows: At first, there is an increased discharge of watery matter from the nostrils, which has a little mucus mixed with it. It generally flows first from the left nostril. It is not thick and sticky, as some say, but it becomes so after passing the first stage. Now, it becomes contagious, and the infected animal should be removed to a separate barn or pasture. If the disease is not now checked, the discharge begins to contain *pus*, and the glands of the nostrils and under jaw become enlarged. The membrane of the nose becomes of a dark purplish or leaden color, and small ulcers break out upon it. At this stage, the general health of the horse begins to fail. He loses flesh, his hair becomes dry and sheds off, he has a poor appetite, an occasional cough, the discharge from the nose becomes bloody and offensive to the smell, and the breathing labored. Tumors soon appear on the face and neck, and inside of the thighs, the hind legs swell and become hot and tender, and the whole animal becoming overcharged with disease, succumbs and dies.

A simple hard cold, or catarrh, or strangles, may sometimes show itself in the form of nasal discharge, fever and loss of appetite, and swol-

len throat, but these will soon pass off, under kind treatment.

The glanders is one of the worst and most fatal of diseases. It is sometimes inherited, and at others communicated by contagion. It sometimes comes from bad stable management, especially bad ventilation. Want of regular exercise, over-work, everything that tends to break down the vitality of the horse tends to induce glanders.

The glanders is quite contagcous. As soon as it is discovered upon a horse, he should at once be put by himself. No other horse should eat from his manger, or drink from the same pail, or wear his bridle. And, worse than all, the owner of the horse sometimes contracts the same malady by handling him.

The only useful remedies are those which will build up the general health of the horse. Turn him out to pasture. Give him light work. Properly managed, a glandered horse will sometimes do moderate service for several years; but when the disease is once established, a real and permanent cure is not to be expected.

For the American Agriculturist.

Horse Coverings and Their Use.

Some good horse-men blanket their horses all the year, while others discard their use. The advocates of the former practice claim that blanketing imparts a sleek and glossy appearance to the coat, effects a saving of food by keeping up the animal heat, protects them from flies and dust, making the grooming easier, and preventing a sudden check of perspiration, which would result in colds or other diseases. Assuming that nature gives the horse sufficient protection, and that whatever increases the labor of tending him without an equivalent gain is to be avoided, too much is claimed. His coat receives an additional gloss from the blanketing, but a horse in good health, well fed and faithfully groomed, wears a coat that needs no polishing. All the food saved by blankets, I think, can be better estimated upon paper than seen in the measure. Were there material gain, it would be economy to blanket our cows and oxen.

Constantly wearing the blanket tends to make a horse sensitive, and liable to take colds. When a horse brought from a warm stable, is stripped of his thick blanket, he undergoes a sudden and great change of temperature. Such treatment seems harsh, if not cruel, at any rate quite the reverse to the course men pursue. When we go out in cold weather, we are very careful to put on extra garments, and then lay them aside while in the house. What would be said of the man who advocated wearing overcoats in the house, and going in shirt sleeves while out of doors. Precisely similar is the practice of always keeping a blanket on a horse in the stall.

As with men, so with horses, the same regimen is not applicable in the same degree to all classes. For those horses which are used only for fast driving, the constant use of the blanket may be advisable and practicable, for they stand in the stable the greater part of the day, and when taken out, they are either heavily blanketed, or their exercise is severe. It is by the owners of this class of horses that the practice is most strongly recommended. But for horses of all work, out every day in all kinds of weather, warm stalls with plenty of bedding in a warm barn are sufficient. Wide cracks between boards near the stalls are not approved means of ventilation in a New-England climate. A barn may be warm and tight, and at the same time well ventilated. The stalls should be upon the warm side of the barn, with high and tight sides, affording double protcction. Influenced by such views, some extensive owners and excellent managers of horses in this vicinity have made their stables warmer, thus dispensing with the constant use of blankets in doors.

It is in their occasional use for preventing chills and colds, that their real benefit is found. Some sort of covering is indispensable for the health and comfort of the horse, when he is made to stand exposed to cold winds; and when he returns to the stable tired and heated, the blanket should be worn until he has cooled off; then remove it, and give him a thorough rubbing down. It is important that blankets should be of ample dimensions, for while exposed to cold, in a heated condition, the muscles of the breast and legs need protection as well as the back and sides; for this purpose blankets should be wide and long enough to pass around and fasten under the breast. A light and thin covering in fly time saves the horse much torment, and frequently saves the master serious runaways and accidents. The india-rubber coverings now becoming so common with express-men and others, who are obliged to be out in all kinds of weather, can not be too highly commended. The judicious use of blankets and other coverings in the ways stated, amply repays all expense and trouble. They prolong the days of many a hard-worked horse, and save him much suffering from stiffened legs and rheumatic muscles.

N. S. T.

Lawrence, Mass.

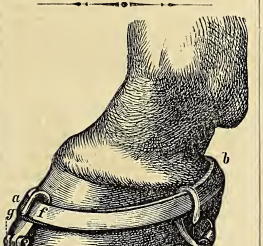


Fig. 1.

New Horse Shoes—Useful for Diseased Hoofs, and also for Instant Application in the Absence of a Blacksmith.

We have received from Germany, some accounts of a new form of horse-shoe, which would appear to be a very desirable improvement. It is patented in Austria, but, so far as we have heard, is free to the public here, and we take pleasure in presenting the accompanying engravings and description to the readers of the *American Agriculturist.* The shoe referred to is one which is applied to the hoof without the use of nails, and may be put on or taken off in a minute's time. One or more of these shoes can be carried by a person traveling, and be applied at once in case of the loss of a shoe, without waiting to reach a blacksmith's shop. They are especially adapted for use on such hoofs as will not endure the driving of nails, owing to disease, external injury, cracks or splits, brittleness, tenderness, etc., and are particularly adapted to diseases of the *sole.*

Description.—In fig. 1, a, e, represent the shoe proper. Fig. 2 shows the bottom part. The outer rim is lighter than in the common shoe, and is strengthened by the cross-bars, which also serve as a protection to the sole of the foot. There may or may not be corks at the front and

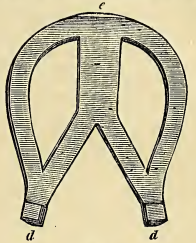


Fig. 2.

rear points. On the front and at the two sides small flat hooks are placed, which turn outwards. A strong India rubber ring or belt, (fig. 1, a, b), $\frac{3}{4}$ inch broad, and $\frac{1}{2}$ inch thick, is drawn over the hoof, and into the hooks extending up from the shoe. As the upper part of the hoof is smaller, the tendency of the rubber ring will be to slip *up*, and thus hold the shoe on firmly. To adapt the shoe to hoofs of various forms, flat or receding, as well as upright, the front hook, at g, is made with a joint. To put on or remove the shoe, it is only necessary to stretch the rubber ring sufficiently to pass it over the bottom. For very tender, diseased hoofs, care is needed not to make the rubber ring so small in diameter, or so heavy, as to pinch the hoof too strongly. As shown in our engraving, the side hooks project so as to endanger interfering. Any ingenious blacksmith can avoid this difficulty.

Look to the Sheepfold.

Sheep will not wholly take care of themselves, accommodating as they are in this respect. Lambs need special attention. In the month of September, they should be separated from their dams, and put into the best pasture the farm affords; perhaps a few old and feeble sheep may go with them. The design of this is to bring them into the wintry season fat and hearty. If under-fed in autumn, they become weak and before winter is over, many will sicken and die.

When brought into the sheep yard early in Winter, they should have, not only a daily ration of good hay, but a little grain or oil-meal beside. Of course they should have good sheds into which they can retreat in stormy weather, and where they can lie at night.

In December, let the bucks and ewes be put together. If it is desired to increase several distinct breeds, divide the ewes into as many separate lots, and put them into separate pens or yards, with a select buck in each. They will all be served in three or four weeks.

The custom of some farmers to neglect providing good fresh water for sheep, is not commendable. They can, indeed, melt snow in their stomachs, and so can all animals if compelled to do so, but good, clean water would be better. By all means, look well to the sheepfold, and especially now, when the high price of woo makes this kind of stock unusually valuable.

Burning Corn for Fuel—Will it Pay?

From recent letters received at the Office of the *American Agriculturist*, and from sundry other sources, we learn that the farmers in some parts of Illinois are using their corn as fuel, in preference to buying coal and hauling it to their farms. At first, this does not seem to exhibit a prosperous state of agriculture—and, indeed, for the present it is not, for we can hardly claim that corn can be *raised* for burning with profit. The present, however, is a disturbed time. While multitudes of men and horses are at the war, and other means of transportation imperfect, as they necessarily are in all new countries, we cannot view it as arguing anything against the profits of farming in Illinois in ordinary times, because corn is now selling at only 10 cents per bushel. And is it possible that corn can, under these circumstances, be a more economical fuel than coal? Let us see.—There are districts in Illinois, and further west, where shelled corn will sell for only 10 cents per bushel. Allowing the corn to weigh 60 pounds to the bushel, 12 pounds for the weight of cobs, and 3 pounds for cost of shelling, we have 10 cents for 75 pounds in the ears. The cost of hauling to the railroad, where say 18 cents for 75 pounds is paid, is put low enough at 8 cents, if the distance is 20 to 30 miles; but if a load of coal is brought back, only half this ought to be charged to the corn. We may then deduct 4 cents per bushel from the price of corn on the farm, to show how much it would cost, used as fuel. This is 6 cents for 75 pounds of corn on the cob, or $1 60 per ton. Corn properly dried does not contain more than 12 to 15 per cent. of water. Ordinary dry wood contains 20 per cent., or more. Therefore, 75 pounds of corn on the cob may be considered as equal at least to 60 pounds *dry* fuel—worth about $2 a ton. According to analysis, this is all combustible, except 1½ per cent. of ashes; it contains 10 per cent. of oil, and the rest is starch, gluten, and woody fiber. Its value for fuel is less per pound than that of coal, but it is doubtless worth more than the best of wood, on account of its large amount of oil. It burns very readily, and if consumed properly, analysis would indicate that it must be worth at least two-thirds as much as coal. So that, with coal costing $8 per ton, it is the cheaper fuel. This would make corn on the cob, at 18 cents per 72 pounds, after carting 20 miles, worth about as much as good hard coal, purchased at that distance from home, at $8 per ton.

There are several other circumstances to be taken into account. When only transient fires are needed, the corn would answer a better purpose than coal, but for a steady Winter fire, the coal would be preferable. Coal of poor quality would be relatively dearer. Then, again, the question turns upon the price of coal, the distance of the markets for selling corn and buying coal, the condition of the roads, the surplus team and man help, etc. All the above calculations taken into account, it is probable that in some localities, and under some circumstances, corn on the cob may be the cheapest fuel.

But there is another view of the question. Beef cattle are worth 2 cents per pound, live weight, at almost any point in the distant West. Good, fat cattle sell in New-York, even in these depressed times, for about 4½ cents per pound, live weight. The best sell for about 5 cents, and 5½ cents per pound, live weight, will pay for driving, freight, care, shrinkage, and a profit, for bringing corn-fed cattle from Iowa. The question then is, will not corn pay more than 10 cents per bushel if used for increasing the tallow and weight of cattle to be sent to Eastern markets? We think 60 pounds of corn will *add* more than 5 pounds to the weight of a bullock or steer. What say practical feeders at the West on this question? At the East, farmers feed to their beef cattle some corn, worth 50 to 70 cents per bushel, though they scarcely realize more than double the net price per pound for beef that is obtained at home by Western farmers.

(PRIZE ARTICLE.)*

On Spring Wheat.

BY EDWIN REYNOLDS—FOND DU LAC COUNTY, WIS.

THE SOIL AND ITS PREPARATION.

The *best* soil is clay loam, with a gravelly subsoil, the surface overlaid with vegetable mold such as prairie, bordering on the burr-oak openings, common at the West. All clay soils of the West will bring good wheat for three or four years without manure, but it is better not to take off more than two or three crops without manuring. Barn-yard manure made on the farm is the best general fertilizer for wheat. When the land is much worn, two bushels of lime, and three of salt to the acre, is probably the best and cheapest fertilizer that can be used. Plow in the Fall from 4 to 10 inches deep, and sow on the lime and salt in Spring. Fall plowing often brings from five to seven bushels of wheat to the acre more than Spring plowing. Deep plowing is the best, as it lets the frost deep into the soil, preparing it for a crop the coming season, and destroying many seeds and insects.

SEED.

The best varieties known in the West are the Canada Club, and Canada Fife. The Rio Grande is an excellent kind for bread, but does not yield equal to either of the above named varieties. A variety known as the China, or Australian, is being introduced and promises well; it resembles the Rio Grande. That the entire harvest may all ripen at the same time, different varieties should be sown. First the Club, second China, third Fife. The sooner wheat is sown in the Spring the surer the crop, and the better the grain—another reason why the land should be plowed in the Fall.

SELECTION AND PREPARATION OF SEED.

Many ways are practiced. The best mode is as follows: Select the best and cleanest portion of the field, and let it stand until thoroughly ripe; cut and shock until quite dry, and thrash with a flail. (Thrashing with a machine often cracks the largest and best grains and destroys their germs.) The seed, though selected as thus directed, should be carefully prepared. The best way is to procure two barrels, two corn baskets, a wash-tub or a half-barrel tub, a large dipper, and a half bushel measure; also plenty of salt, and one ounce of blue vitriol to each bushel. Place the tub in a convenient place, and a barrel on either side. Make four to six pailfuls of strong brine in each barrel, with two ounces of pulverized vitriol to the pailful. Fill the tub with brine, leaving space enough for one half bushel of wheat. Commence washing by pouring a half bushel of wheat into the tub near one side, in a small stream to prevent the grain from carrying down the lighter substances to the bottom. Skim off with the dipper and throw the skimmings into the basket placed on the right-hand barrel. Stir and skim until you have cleaned your seed perfectly, then pour the contents of the tub into the basket upon the left-hand barrel, and let it remain there until another washing is ready, when it must be thrown in a pile on the floor. Fill the tub from the barrels and keep good watch of the bottom of your barrels to see that the supply of salt and vitriol is constantly kept good, as otherwise the brine will soon become so weak that it will not float the heaviest oats. The vitriol acts as a preventive against smut, and the salt will pay its cost as a fertilizer. This work can be done in stormy weather, as the seed will take no harm by lying in the pile for a week or more. Lime may be used as a dryer, but should not be mixed with the wheat until the morning you commence sowing, as it will eat out the chit if left too long. When washing keep account of the bushels washed, measure the pile when you commence sowing so as to know how much it has swollen, deduct the foul mass in the basket, and by a little figuring you can ascertain how much it will require to the acre to use the same quantity as if dry. Seed cleansed in this manner does not require so much to the acre as when sown filth and all.

SOWING.

Should the ground be very uneven, it should be dragged down with a cultivator or thirty-tooth drag, in order that the grain may be covered evenly. Sowing with a seed drill is best, for the reason that it puts all the grain in at the same depth, whereby it all comes up at the same time, and ripens more evenly than when put in with a drag or cultivator. But all farmers are not forehanded enough to purchase a drill, and some must continue the old way of sowing. Many inventions for *sowing* have been scattered all over the country—some very good ones. I know of no better method than sowing broadcast by hand, as high winds prevail at the sowing season, and but few machines can be used in the wind to advantage.

The best method of sowing broadcast is, first to sow through with one hand then back with the other, always throwing with the wind. For instance: If the wind is blowing from the south go first to the east and throw with the right hand. Then pace off four paces or less, face about and sow to the west, shifting your bag and sowing with the left hand. The bag should be opened at the mouth by a hoop sewed into it; tie one lower corner to the mouth and sling it over the shoulder. A man can thus sow in any wind.

COVERING, HARROWING-IN, BUSHING, ETC.

A cultivator, in the form of a V, does very good work, but a still better one coming into use in these parts is, rectangular, three feet wide and eight feet long, with a cross-bar holding each tooth in its proper place, and furnished with a roller at each end. The ground should first be in a mellow, dry state; as wet, clumsy ground makes hard work for the team, and it is left in a poor condition for a crop. Sow from March 20th to April 15th, according to the lateness of the Spring.

Cultivate across the plowing, lapping one half, or use a thirty or forty tooth drag with the furrows, also lapping one half. The common practice of cross dragging will uncover more grain than it will cover up, therefore the dragging should be all done one way. To make the work complete, pass over it with a heavy roller. Where a roller can not be had, a brush drag made in the following manner, answers a very good purpose: Take a straight pole, five or six inches through, and bore holes about eighteen inches apart, into which insert bushes or small trees 10 or 12 feet long, with as branching tops as can conveniently be found. Then fasten a rope 16 or 20 feet long from one end of the pole to the other forming a bail, to the center of which attach the team. One horse can draw the drag, and a boy ten years old can drive it, and do the work. The pole mashes the lumps, and the brush whips the dirt into a fine state and leaves the field very smooth, and is better for land in a wet state than a roller.

AFTER TREATMENT AND INSECTS.

Very little is to be done after sowing a well cultivated farm. Clean out all brush or stones in the way of the reaper. Should the weather be dry, fields that were bushed may require rolling. This depends on the state of the soil. Should it appear too light and mellow, don't be afraid to put on a good heavy roller, even after the wheat is six inches high. When heading out, all oats and foul weeds should be pulled out, where it can be done without trampling down the wheat. A hooked knife attached to the end of a long pole can be used to a good purpose in cleaning fields, by walking through the dead furrows and reaching to the right and left cutting off the oats and foul stuff close to the ground, letting them fall in the grain, unless ripe enough to germinate, when they should be picked out and taken off. I know but little of insects, as nothing troubles our wheat but Chinch bugs. I know no remedy for these. Lime and salt may cure them as effectually as any thing. They evidently do not like the salt. Early sowing of the early varieties may be practiced with good success in guarding against insects of almost all sorts, the weevil excepted.

THE HARVESTING

is a very important part of wheat raising. From the time the wheat begins to turn, the farmer has much anxiety. His fields are closely watched, while he is preparing to perform the hardest work of the season. Every thing must be put in perfect order. Help must be secured, (and, what is also important, preparations be made to pay help). Wheat cut too green will shrink, and if too ripe it will shell. But there is little danger of making the mistake of cutting too green. Most wheat is cut too ripe. The earliest sown fields should be visited from day to day, the kernels examined, and as soon as the wheat is out of the milk, and fairly in the dough, cutting should commence. Wheat cut in this stage is whiter, will weigh more to the bushel, yield less bran, more and better flour, and sell better—as is well known to all who have tried the experi-

* The Committee found several very good articles among those prescated for examination. This one seems to come the nearest to the requirements of the offered Prize.—The main defect in all the essays presented is, that they dwell too much upon processes common to harvesting, securing, and thrashing all kinds of grain, and too little upon the advantages of Spring wheat, the best kinds, suitable soils and their preparation, maburing, season of sowing, etc.—CHAIRMAN OF COM.

lment. Cutting should be done with neatness and dispatch. Never purchase a reaper until you have tried the identical machine you intend to purchase. Reapers of the same manufacturer will not work equally well, therefore try different ones, until you get one that will do the work well and fast. When you have a reaper keep it in repair, and if you are not capable of doing it yourself, put it in charge of a man that is. A poor cradle, or a good one in poor repair is the greatest nuisance a farmer can have in his fields, except a poor hand. A cradler should understand keeping his cradle in good working order, for a cradle or rather its fingers want altering in changing from light to heavy grain, or from wet to dry grain. Then again the scythe may be too long so as to cut more grain than the fingers will gather; in this case cut off the point of the scythe, and if the fingers are too long serve them in the same way, otherwise they will haul in the standing grain and make hard work, and at the same time a waste. And this is not all—the grain thus pulled down will lie under the next swath and hinder the binder.

BINDING.

Poor binding spoils every thing from cutting to feeding the bundles into the thrashing machine. In binding after a cradler, while raking the swath into a sheaf, the buts should be kept against the leg and the grain slid together, instead of rolling it, so as to keep the buts even and the sheaf of its proper length. A band should be made in such a way that one part will draw across the heads in the band and hold them firm against the sheaf. Too much straw in a band is a detriment, as it can not be drawn tightly enough;—no more than fifty straws should be used. To make a stout band quickly, gripe the straw in the left hand just below the heads; divide it with the right hand; pass one half around the other and over the middle; take it in the right, near enough to the middle to clap the thumb on the heads, and thus hold them firm. Place the band over the bundle, and at the same time pass the left hand under it with the back next the ground, grasping the lower end of the band half way from the heads to the tie, and draw it under the sheaf, as near the middle as possible. As the tie in the band becomes firmly set against the sheaf, slip the hands together, holding on with the three lower fingers of the left hand, draw the end in the right hand between the thumb and forefingers of left; then tuck the ends under the thumb of the left and lay it about a little back, then clap your rake on the but of the sheaf, draw it towards you, dropping the rake off the bundle on the ground so as to catch the scatterings and pass on to the next. What I have been so long in describing can all be done in half a minute. Binding done in this way will stand the test of handling, and every farmer knows it must undergo a good deal before it reaches the thrashing machine. Just consider, Mr. Binder, how much you may hinder the operations of the harvest by slovenly binding. The sheaves must be carried together, perhaps by boys, then shocked and capped; next pitched on the wagon or cart, then pitched to the stacker on the mow, thence to the band cutter. Should only one bundle in twenty give out in passing through all these various moves, it wastes much time and grain. One man stopping to bind a bundle hinders not only himself but another man and team. It requires much time to gather up the scatterings, and these put into a stack often causes it to slide out of shape, which lets in the water and sometimes destroys a large quantity of grain. Then again the thrashing is hindered as it takes much longer to thrash loose grain than bound. A thrashing machine running at half speed hinders half the time of ten or twelve hands and eight horses, and all in consequence of a poor slovenly binder. Brother farmer, just watch your binders, and if you can't persuade them to do their work well, pay them off and let them tramp. (Provided you can get better ones.—Ed.)

SHOCKING.

Large fields of wheat are often seen thrown together; two and two, and then, in consequence of the hurry and scarcity of hands, the grain is allowed to remain for weeks, and unless a man is employed to go over the ground after every blow or rain, it must damage to a considerable extent, for the heads can not remain always lying on the ground without growing. By wetting and drying a number of times it becomes bleached, the bran shrivels, and the grain loses its vitality—called among farmers being "banged."

Grain of all kinds, and more particularly spring wheat, should be put up in round shocks and capped with a double cap. Commence by setting four bundles in a square, and then four more, one in each corner thus:

setting the buts firm on the ground and pressing the heads together. Select two smallish, long, slim bundles, break one across one arm by handfuls until the whole is broken. Then lay it on the shock, spreading the heads and but as much as possible. Then take the other bundle and slip the band well towards the but, and proceed as before, placing the heads in the opposite direction from the other, letting the heads cover the bands of the first one. Wheat shocked in this way will stand a long time, and any storm, except a hard blow, without damaging. It will dry out in a shorter time than if set two and two, for the reason that water can not penetrate any part of the shock. Wheat cut very green will cure in this way as soon as any, as any one can see that all the bands are left to the air. It will not shell as badly when handling, and is not exposed to birds and chipmunks as when set two and two. Should the grain be very ripe and dry, fourteen sheaves may as well be put in a shock as ten.

STACKING, ETC.,

requires care, skill, watchfulness and cautious judgment. The careless and slovenly manner in which stacking is often done is the cause of much loss of grain and time. Stacks thrown hurriedly and loosely together are sure to damage, unless the weather holds dry for ten or twelve days until the stacks are sufficiently settled to shed water. Farmers are often deceived in stacks, and are drawn off from a distance to work in harvest, and anxious to make as long a job as possible, "crack themselves up" as stackers; they are set to work, and the farmers knowing them to be good hands otherwise, have confidence in them, and take little notice how the work is done, and all thrashing time, lo and behold wet stacks from top to bottom, three or four hundred bushels of wheat to be kept separate and dried; then, after two or three weeks of perplexing care, and loss of time, he has that amount of damaged grain for market, which injures his reputation as a good wheat grower.

In driving to the stack, care should be had not to drive the load too near the stack or hit it, for after a stack is once started a small jog or push may cause a slide, which will create a shoulder and a leak, besides making much trouble for the stacker. Commence your stack by setting a bundle erect in the center of the ground on which you wish to build the stack, then set around it, going round and round keeping the sheaves as perpendicular as possible until you have attained a diameter of about fourteen feet; still adhering to the plunge the bottom but press the heads inward setting the buts out until the bottom will measure sixteen feet across, bringing the outside course quite flat. A few rails or boards may advantageously be used under the stack. Now commence on the outside, laying the second course upon your knee, putting your whole weight on each bundle and pressing them firmly together. The second row must be placed upon the first, covering the heads of the first and laying the buts even with the bands, if the bundles are of ordinary size and length of straw. Should the straw be long and loose, cover the heads from eight to nine inches; this will in full view pressing them firmly with the knees, and continue to go around in this way until the center is reached. Keep constantly in mind that the center must be kept full and *solid*. To effect this more perfectly, the outside rows may be laid loosely and packed a little as the center is approached, so that when the stack settles the outside courses may settle faster than the center, thus giving the buts of the outside course a downward inclination which will carry off the water perfectly. Build the stack perpendicularly four to six courses; then lay out, very slowly at first, five or six courses more; then three courses, one above the other, after which draw in, gradually at first. As soon as you commence drawing in, fill the middle fuller or pack tighter. A stack may be rounded off on the top, for convenience, and be perfectly safe from wet, by capping with hay or straw. If cradled in wet, a cap can be made of a sheaf and put on buts up. It is very inconvenient to put a sharp top on a large stack, oftentimes requiring a third hand, and the work is no better.

Should your stack become lower on one side than the other, avoid the foolish practice of laying on two courses, for by doing so you often cause a slide, but pack the lower side tighter, and the opposite looser until your stack is level, then proceed as before. The pitcher should have his mind on his work and keep a constant watch of the stacker. Care should be always taken not to throw the bundles on the outside course, after the stacker is off, and before the second course is placed upon it, for the reason that it may get a start outward, throwing the stack out of shape, so that it will settle with a shoulder and make a leak. Always throw the bundle in the most convenient way for the stacker. Never throw the second bundle until the first is disposed of. Mowing away wheat in barns I say nothing of, as it is safe in almost any way, but is done most conveniently in regular courses.

THRASHING.

Probably no work is more dreaded by the farmer than thrashing. Why it is so, I hardly know, unless for the reason that there are so many slovenly, lawless thrashers. The remarks made on running a reaper will apply to the thrashing machine. Farmers that know nothing of machinery often purchase thrashing machines and go forth with all confidence imaginable, but soon, for want of care and the requisite knowledge of their machine, it becomes rickety and badly worn. Thus dilapidated, stoppages frequently occur, making the job long and tedious. One experienced thrasher that has the faculty of keeping his machine in repair, is worth more to a farming community than six of the opposite stripe. Thrashers with good new machines are the most profitable to employ, provided they understand their business.

The farmer should have hands enough at thrashing to relieve him from any fixed position, so as to make himself a "spare hand." This gives him an opportunity to look around and see that the work is well done. Examine the straw, and see that the wheat is thrashed clean; examine the sieve and see that the wheat does not blow over in the chaff. Look to it and see that the wheat is not "bit by the cylinder, and if so order the concave lowered.

Thrashing should never be done until the stacks are through sweating. Stacks after standing one week, commence sweating and continue to sweat about two weeks, so that it is not safe to thrash until the stacks have stood for about four weeks. Wheat thrashed while sweating is sure to be damp and liable to must in the bins; but thrashed after the sweating process is over, it is better for milling than when thrashed before, from the fact that the bran is softer, and the flour is easier separated from it, thus giving a better yield, and whiter flour. Should your wheat be damp, and it be necessary to put it in bins without drying, avoid the foolish practice of putting in lime to absorb the moisture. Throw in a few stones or bricks, which will draw the moisture from the wheat, having the same effect as the lime, and leave the grain clean and smooth; which will please the miller much better than lime and rough dirty wheat. To clean it of smut forsee roll in lime for twenty four hours, which will burst the smut balls; then you can blow them out with a good mill.

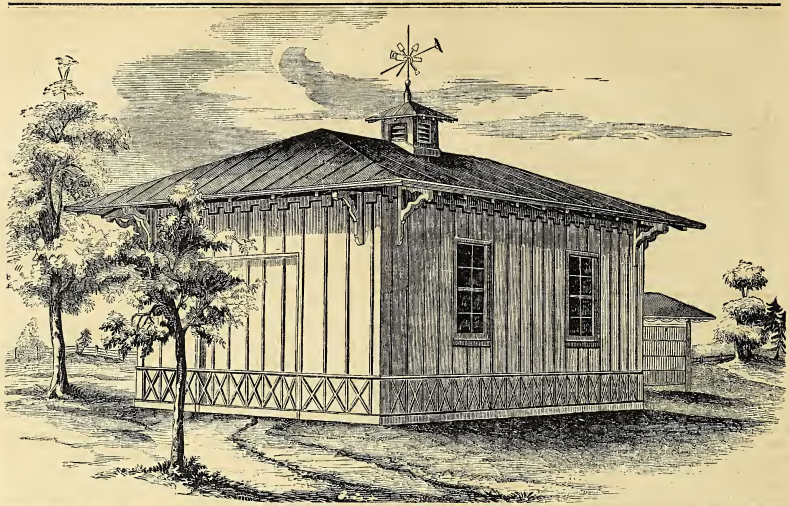
MARKETING.

Marketing wheat successfully depends very much on the locality in which the farmer is situated, and the facilities for getting to market. Obstacles are often thrown in the producers way by the grain speculator, such as raising the bids for a day or two so as to get a large quantity coming into their place of buying, and then falling down below all reason. In towns where that practice prevails, watch all their moves, and when your suspicions are strong enough to warrant it, call on the scaler of weights and measures. Still, that is of but little use, for as soon as he is gone the scales are out of balance or the measures are exchanged for others to suit the trade. Many ways are resorted to, to pilfer from the honest unsuspecting farmer. Some of these I have detected in my experience, and will mention. Every farmer that goes to market should know his own weight, and let no wheat be weighed step on the scales, see that they are balanced and weigh rightly, for scales are so constructed that a slight move will throw them in the buyer's favor—that is one practice. Again a set of false weights is sometimes kept and slipped on slyly. A sixty pound weight is sometimes placed under the large ones. The grain dealer will split a small quantity and forget to put it back. If measured, fix your eye on some mark on the half bushel so as to know it, and see that it is not changed. As soon as you discover any fraud practiced on you, have no more dealing with that man, for there are plenty of honest men in the grain business. When you find one of that character, give him all your patronage and induce as many of your neighbors as possible to go with you; and at the same time, watch him to *keep* him honest. He will pay you all he can afford to, and if another man offers you a cent or two more than he does, don't, like a blind fish, grab at the bait, for there is surely a *hook* at the end of the line.

Farmers that raise wheat enough to do so should send by the car-load, or cargo, to some commission merchant in a large commercial town, say Chicago, Milwaukee, or Buffalo, and consign his wheat to him as long as he is doing a large business, for be assured, that when a large number of his customers have left him, there is something wrong, and the less business he does the less he can afford to be strictly honest. As to the time of marketing wheat, sell when your creditors want their pay, or when you can use the money to the best advantage.

GENERAL REMARKS.

No farmer can succeed any great length of time in wheat growing by following that branch of agriculture alone. Fertilizers must be had sooner or later, and the straw alone and manure of the teams afford but a small supply. Therefore a farm of 200 acres should be so arranged as to keep at least one hundred sheep, five cows, and raise heifers enough to keep the stock of cows good. Also raise a yoke of oxen as often as once in six years. Keep a good pair of mares and from them raise, occasionally, a span of colts for market, or to remain on the farm. Six to ten swine may be fatted yearly. From that amount of stock, if the straw is properly worked in, from 200 to 250 loads of manure may be made annually. Wheat will do well and equally well on corn stubble as on plowing, if well cultivated in.



VIEW OF THE TOOL HOUSE OF TOWNSEND SHARPLESS, AT HIS SUMMER RESIDENCE IN BIRMINGHAM TOWNSHIP, CHESTER COUNTY, PENN.

A Tool House—Valuable Suggestions.

A separate place for each thing, and every thing in its place.

All ranged in order, and disposed with grace,
Shape marked of each, and each one in its place;
Nor this alone the curious eye to please,
But to be found, whene'er required, with ease.
If used or loaned, and not returned by rule,
The vacant shape will show the missing tool;
Thus often urged the careless will improve,
And rules of order soon will learn to love.

The Tool House, drawings of which are presented to the readers of the *Agriculturist*, is at the summer residence of a citizen of Philadelphia. The building is 20 feet long by 12 feet wide, and is lined with smooth boards. The engravings are exact representations of the building and its interior arrangements, with a few slight exceptions; and notwithstanding there are about 200 tools or implements upon its walls, yet the number may be considerably increased by filling up the vacant spaces with smaller articles, as there may be occasion. The tools are well secured in their places, and yet may be taken down or put up with ease. They are supported by means of nails, iron hooks of different sizes (such as are used by plumbers), stout iron staples, both flat and round, and lighter ones made of wire with the ends sharpened, and of size proportioned to the weight of the tool. *The shape of each article is marked upon the wall*, with a small stiff brush and ink, and the tools being upon the sides of the building, the floor is left free for other purposes. Their methodical arrangement, and the shape of each being distinctly marked, combine advantages as to economy of space and security against loss, which could not perhaps be so well attained by any other mode, and it is believed to be the secret of causing things to keep in their places. The writer, with whom the idea of marking out the shape originated, has had the plan in operation for many years, and always with satisfactory results; and the illustrations are presented in the hope that they may lead others to adopt this plan.

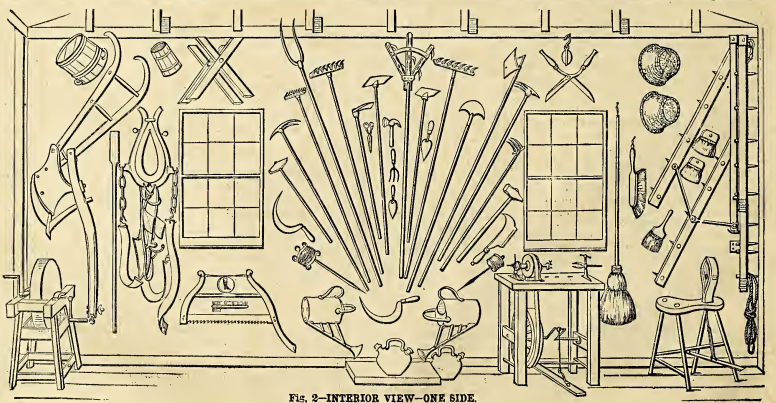


FIG. 2—INTERIOR VIEW—ONE SIDE.

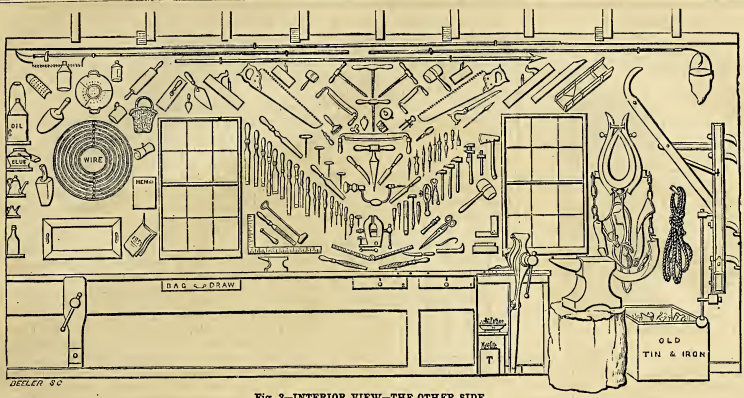


Fig. 3—INTERIOR VIEW—THE OTHER SIDE.

We need not remind the farmer how important it is that every one should have a work shop, or a substitute for one—a place where his tools may be neatly and conveniently arranged, and safely kept, and where those in his employ may occupy their leisure time pleasantly and profitably. Carefulness is often the result of early training, but indolence lies at the foundation of carelessness. Other things being equal, the careful man is generally the prosperous one, while carelessness and thriftlessness being nearly allied, always lead to loss, and frequently to disastrous results. Hence the importance of encouraging in youth habits of order, of carefulness, and of continuous useful industry.—Some borrowers are habitually neglectful in returning. Of these it has been humorously said, that "*it was trouble enough for them to borrow.*" In arranging the tools as recommended, the value of the principle of association is forcibly illustrated, and perhaps no other mode is so effectual in impressing the necessity of returning borrowed articles.

"Signs which address the ear are lost and die
In one short hour, but that which strikes the eye
Lives long upon the mind. The faithful sight
Engraves the knowledge with a beam of light."

If, therefore, when a tool is loaned, the *shape* of it is seen distinctly marked in the place from which it is taken, it will make an impression upon the mind of the borrower, which will be increased by a recollection of the fact that it will act as a tell-tale, and will not cease its importunities until its demand for the return of the article is satisfied. It requires a little effort and time to carry the plan into effect. But what that is valuable can be accomplished without effort? To the energetic mind there is a pleasure in overcoming difficulties, and any one who will adopt the plan, however rude or imperfect may be the arrangement, will find a virtue in it, in the preservation of his tools, and in promoting habits of good order beyond his expectations. Every one is an example to others for good or for evil, and he who makes even one step forward may thereby render important services in his neighborhood.

The writer would venture another suggestion. In every kind of business, there are details often neglected for want of being thought of at *the proper time*. To remedy this, it is recommended that a slate or pasteboard card, with a pencil and a piece of india-rubber attached, be hung in the shop,

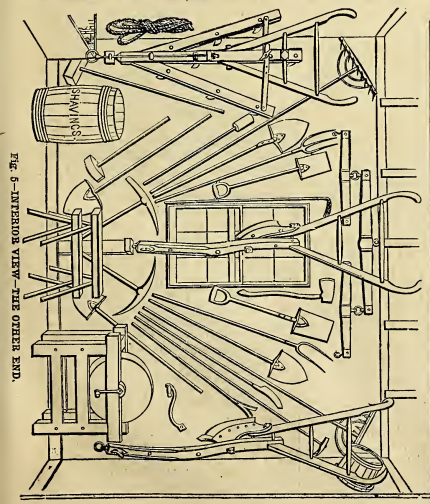


Fig. 5—INTERIOR VIEW—THE OTHER END.

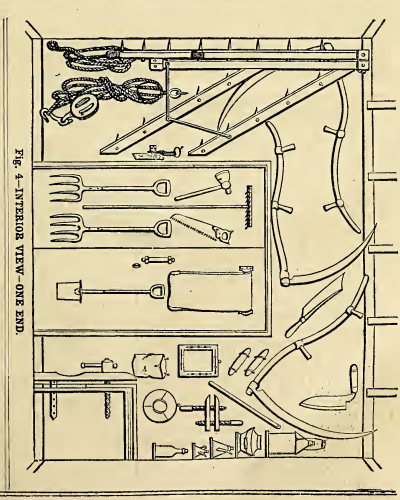


Fig. 4—INTERIOR VIEW—ONE END.

spaced and arranged under proper heads so as to show what special duties are to be performed, and by whom to be attended to when at leisure.

If the Principal would carry with him a small book, composed simply of two pieces of pasteboard,

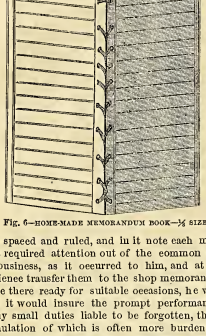


FIG. 6—HOME-MADE MEMORANDUM BOOK—¼ SIZE.

also spaced and ruled, and in it note each matter that required attention out of the common order of business, as it occurred to him, and at convenience transfer them to the shop memorandum, to be there ready for suitable occasions, he would find it would insure the prompt performance of many small duties liable to be forgotten, the accumulation of which is often more burdensome to the mind of a business man, than those of larger moment. MIQUON.

N. B.—Previous to affixing the tools to the wall, the size of the space to be occupied should be marked upon the floor, and the arrangement first made there. Some article should be selected as a starting point or centre, around which the others should be placed so as to produce a symmetrical effect. If not at first satisfactory, change the position of some, or all—arrange and re-arrange them, until they meet approval.

The ink used for making, should be a little thickened with the "grounds," and mixed upon a slate. The lines should be made dark, and on one side [*corresponding throughout the whole side*] the lines should be made much heavier than the other, to increase the effect, and add to the distinctness of shape, when the tools are absent.

Persons may make their own brushes, thus: Prepare a piece of wood about the size of a pen handle

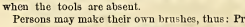


FIG. 7—HOME-MADE MARKING BRUSH—FULL SIZE.

—then with a sharp knife make two slits in one end, the tenth or twelfth of an inch apart, and about an inch in depth. Then cut out the tongue thus formed, and fill the space with bristles (from an old brush), and secure them there by wrapping with thread. If the edges of the wood near the end are thinned, it makes a neater job. To get the bristles in nicely, cut the ends off straight, lay them crosswise in the opening, then bend them down, and wrap tight. Cut off the outside ends square, about a quarter of an inch from the stick. The brush is then complete, like the sample herewith. A little chalk rubbed over the place to be marked, will cause it to receive the ink without difficulty, and the ink will not run.

I send a sample of the book above referred to, for thy own use. It is made of French paste board, part of the lid of a glove box being peculiarly suitable. It is 6½ inches long by 3 inches wide; made in two pieces, and hinged by tape or ribbon, passed through holes in the edges, herring-bone style, thus forming a double hinge.

This book should always be carried in a suitable pocket, *inside the vest*, left hand side. The vest is most suitable, as one rarely changes that, and it leaves the coat pocket for other uses. M.

EDITORIAL REMARKS.—We are happy to have the privilege of placing before a vast multitude of readers the above communication, with the engravings, which, in part, originally appeared in a journal of only limited circulation, and were therefore not generally seen. The hints about the marking out the place of each tool back of where it is hung, are admirable. The Brush and Memorandum Book, or tablet, received, we have sketched above. They are easily made; they can be seen on our exhibition tables.

Townsend Sharpless has carried out in his business in Philadelphia the same systematic order indicated by his tool-house, and has attained eminent success. Energy, patient effort, and *systematic habits*, will seldom fail to secure success. Let us here caution the reader against turning from the perusal of this chapter with the remark, or *feeling*, that "this is all very well for the rich man, with his 200 tools, and time and money to carry out such a system." Nay, friend, the same plan is equally applicable in the barn, or out-house, or shed, (*as well as in the house,*) of the poorest farmer in the land. It is time-saving and room-saving, to have a place for the ax, hammer, saw, chisel, shovel, hoe, scythe, rake, etc., and to have their place properly indicated.

The Chestnut Tree.

For ornamental purposes, the Chestnut (*Castanea vesca,*) is hardly inferior to that monarch of the forest, the oak. Its branches ramify more loosely, and spread over a greater surface in proportion to its hight than most of the oaks. It also grows more rapidly, and in the forest it often rises ninety feet. It attains to great age, and then is of immense size. Its dark, finely cut and glossy foliage, its lofty and massy head, covered at certain seasons with golden flowered tassels, and then with clusters of fruit, render it a grand and picturesque object in the landscape. With several of the old Italian artists, it was made a favorite feature in their paintings. "This is the tree (says Gilpin,) which graces the landscapes of Salvator Rosa. The chestnut flourished in the mountains of Calabria, where he painted. There he studied it in all its forms, breaking and disposing of it in a thousand beautiful shapes, as the exigencies of his composition required."

The European varieties resemble our native tree, but have this advantage, that they remain green several weeks in Autumn, after ours have fallen into "the sere and yellow leaf." The Spanish chestnut, a very beautiful tree, is not hardy north of latitude 42°. The common American is hardy everywhere, being found, says Emerson, "on the banks of the Mousam river, Maine, above the 43d parallel of latitude, and thence southward as far as Florida, and in the western States.

The economical uses of the chestnut are not few nor unimportant. Its timber is valuable. The timber of old trees is rather loose grained and perishable, but that of the second growth is hard and durable. For posts and rails, the first being charred before setting, it makes an excellent material. By all means let the trees be felled in summer, (in what quarter of the moon we care not). This wood is sometimes used by the carpenter for inside finish. We have seen several private libraries in which chestnut wood constituted the material of the window-frames, doors, mantel pieces, and book-shelves, and being oiled and varnished, without paint, the effect was very good. In the house of a friend, thus furnished, we hardly know which to admire most, this, or the oak of his hall, or the butternut of his dining room. "In France," says Michaux, "chestnut copses are considered valuable species of property. Every seven years, they are cut for hoops, and the largest branches serve for vine-props; at the end of fourteen years, they furnish hoops for large tubs, and at the end of 25 years, they are proper for posts and light timber."

The boys and the squirrels will put in another plea for the chestnuts—they are capital things to eat! "Going a nutting," means a great deal of fun. And a peck of chestnuts bought at the corner grocery for munching, with lads and lasses around the winter fireside, means a great deal of home enjoyment.

Chestnut trees, like the oak, are hard to transplant, if taken wild from the woods. The best way is to buy them from the nurseries, where they have been several times transplanted. Or, if you are in no haste, raise them from seed yourself. Choose a rather light soil, and sow the nuts in drills. They should not be allowed to become dry before planting. Chestnuts not too dry may be planted early in Spring. Take fresh chestnuts in the autumn, mix them in a box of leaf mold and sand, and set them out of doors for the winter, guarding them, meanwhile, from mice and squirrels. In the early Spring, as soon as they begin to swell and sprout, plant them out in drills two inches deep, and a foot apart in the drills. The second year, take out every other tree, to give the remainder a better chance to grow into handsome, shapely specimens. By the second or third year, they should all be transplanted, so as to fit them for their final removal.

Garden for an Old Gentleman.

MR. EDITOR:—I lament to see so many gardens now-a-days made in such a starched up manner. Especially do I regret to see the "front-yard" spaded up and laid off into flower beds of all sorts of shapes, triangles, rhomboids and so on. Full half of these beds are very slovenly kept, and their untidiness makes a neat man nervous. But if kept ever so well, the gay colors of the flowers right before one's door, are rather exciting to an old man who loves quiet. What need of keeping folks in a state of admiring ecstacy all the time? Why not give us in front of the house and along the main walks, simply green grass, smooth as you please, and trees as fine as you please; and then place the flower borders a little one side, where we can easily visit them, and enjoy their colors and perfumes when we have a mind to? Such are the conclusions of my long experience: the readers of the *American Agriculturist* may take them for what they are worth.

I am sorry to see so many old gentlemen growing indifferent to ornamental gardening, and caring only for beets and cabbages. With me, the love of my youth and prime keeps fresh under my thin grey locks. Sometimes, I fancy that I detect fragrance less nicely than I used to, and distinguish shades of color less accurately; but there is a good deal of enjoyment left me yet; and I mean to keep my senses bright by use.

May I add a word or two of advice about the arrangement of gardens? I don't like to see a jumble of geraniums, heliotropes, verbenas, and petunias, in one small bed. The sight gives an orderly man the headache. Put each sort of plant by itself in masses; or at least, put only those together which resemble each other in size and form. Probably, the old plan of mixing up shrubs, herbaceous perennials and an-

nuals in the same bed of the flower garden will never die out—perhaps it had better not, all things considered—but would it not be well to take more pains to keep up a constant succession of blossoms in such borders? As fast as the spring bulbs bloom and fade, let early annuals be set out to fill up the gaps; and so when the biennials have had their day and gone. Keep the whole ground covered with fresh looking plants of some kind. In setting out herbaceous plants, don't stand them in straight rows, and exactly the same distance apart, like a regiment of spruce soldiers; break up the stiffness somehow.

There are two or three other things you must bear with from an old man, viz.: one word about walks, one about seats, and one about grass. You can't make your walks, my son, too hard and smooth. Of course, you will keep them clean, the verges well defined, and the curves as neatly cut as when first laid out. Some persons let the grass grow out into the gravel in one place, and then jag into the edges rudely in many other places. Preserve your lines well. Nothing gives a place such an air of finish as a good system of walks well kept. And when I visit you, let me find them hard and smooth, for I am not very sure footed of late years.

But good paths are not the only thing; they should lead to something. If they are long, there should be several resting places by the way-side, little nooks under the trees, sheltered from the sun and wind, with comfortable seats where one can sit after dinner, and read his book or newspaper, or play with his grandchildren.

Let one or more of these resting-places have good out-looks upon the surrounding country, commanding views of hills, streams, and the sky.

Now, about grass. A hay-field is a good thing in its place, very; but before a gentleman's front-door, it is *not* good. Oh! for the green, velvety lawns I saw in merry England, where I once traveled when a young man. But why not try to have good lawns in this country, be they large or small? We might have them, if young people would only set about it. Get your ground well graded at first, well tilled, well seeded down: then mow the grass often, (say once a fortnight) roll it after every shower, and you have a lawn worth the name. Give a country place good trees and smooth grass, and it will always be attractive. But I plead most earnestly for the smooth grass, for it has such an air of calm repose to an old man's eye, and such a pleasant softness to the tread of an old man's foot. SENEX.

Fungi in Cellars.

A late number of the Mark Lane Express speaks of a destructive fungus, which is doing great damage in England, especially in the wine cellars. It attacks the corks of the bottles and causes their decay—often to the destruction of their entire contents. Of a lot of Sherry bottled in 1840, the recent loss amounted to ten bottles in a hundred, and in other instances it was still greater—in one case amounting to eighty bottles in a hundred. The fungus, or dry rot, had penetrated the corks, even where covered with black mouse skin. The greatest mischief was found in cellars in which either saw dust or laths were used, the spawn of the fungus being apparently introduced with the wood or saw dust. Where either of these are used, it is recommended to first kyanize them by steeping in a solution of blue vitriol and water. But an effectual remedy would be, to seal the corks, by dipping them into melted lard and resin, of a consistency which would neither drip nor crack off. This will entirely prevent attacks from fungi, and from insects, which sometimes prove troublesome in wine vaults.

A Grape Hint.

In talking, lately, with a German vineyardist, the subject of spring and fall pruning came up. We advocated fall pruning for several reasons, and among others, this, that in autumn, the vines do not bleed, as they would in the spring.

"But," said the German, "dat ish no matter. *Let* him bleed, I *want* him bleed. If you cut off de canes in autumn, de wound dries up and hardens over." He went on to say that the drying up of the wound in autumn prevented the escape of the sap which naturally belongs in those canes, and which ought to be allowed to escape. If it can not pass off, it returns to the roots and causes them to rot.

Our friend was very earnest on this point. He insisted that for every cane cut off in autumn, a root was destroyed by excess of sap and consequent rotting. Cut off the shoots in the spring, and let the sap which has accumulated in the winter, flow off through the wounds, and no harm will come to the plant. When the excess has run off, it will stop and the wound will heal. He also maintained that fall-pruning, by checking the natural escape of sap, through several canes, caused a superabundant growth of new wood in the following summer. Prune in the spring, let the surplus sap run off, and you will get but a moderate growth of new wood.

As to fall-pruning causing rot of the roots, and premature death of the vines, we told our friend that we had seen vines so managed for a quarter of a century, and they were still in perfect health, much more so than some other vines of a neighbor which were seldom, if ever, pruned. We would thank him to *prove*, as well as assert, that fall-pruning caused rot in the roots. On the contrary, we would ask, when shoots are cut off late in Spring, does not the out-flow of sap induce a species of blight and rot upon said shoots? It certainly does on fruit and shade trees pruned at that season.

Our German friend's last argument had some more weight with us, viz.: that autumn-pruning induced a superabundant growth of wood the following season. This *fact* can not be denied. We stimulate growth by deep trenching and manuring, and then we excite it again by autumn pruning, which breaks up the balance between root and top. In reply, we hinted some objection to the deep trenching and heavy manuring recommended by some grape-growers, and we advocated a moderate pruning in mid-summer to check this overgrowth, and so save the need of severe fall pruning. Also, we said that the grand object in grape growing was to get regular and abundant crops of good fruit; and he could not deny that the prevailing system produced such results. We were tempted to hint to him that the mildew which we had often seen in his vineyard, did not speak well for his system; but we let the hint go unspoken. Still, the German's notions (which he said, were the doctrines of his countrymen in Europe,) are worthy of consideration.

How to Grow Gooseberries.

Many cultivators suffer from insects and mildew so badly, they have about given up the attempt to raise this very agreeable fruit. We suspect that a barren soil, stunting the growth of the plants, is, in many cases, the cause of the blight complained of. Another cause is the sudden alternations of temperature that occur almost every Summer. It is a mistaken notion that because the gooseberry is often found wild in poor soils, it therefore needs no manure. With the writer the treatment which ensures the best results is as follows: Give the plants a dressing of manure in the Fall, packing it in around the roots in Spring. Keep the ground clean and open until about the middle of May or first of June. Then, spread under the branches a layer of straw five or six inches thick, letting it extend over the ground as far as the roots penetrate. This mulching should remain on the ground until the first of September, when it should be removed and the soil worked clean. The design of this mid-summer dressing is to prevent any check in the growth of wood or fruit, and to keep the air about the bushes uniformly moist and cool. In this simple way, we manage to get good crops, as often as five years out of seven. Persons near the sea-side might use sea-weed or salt hay for a mulch. Tanners' bark is often used with success.

Overgrown Oleanders.

Such cases are quite common. In many a house we have seen oleanders from six to eight feet high, handsome and thrifty, but taking up too much room, and so large and cumbersome as to be moved with great difficulty. What shall be done? Just this: begin at once to raise a new plant from the old pet of the household. Take off cuttings six or eight inches long after they have done flowering next season, set them out in any shaded border of the garden, working in a little sand where they are to stand. If the wood is well ripened, eight out of every ten will make fine rooted plants in a few months.

Mushroom Spawn.

In answer to several inquirers: The mushroom seed, or "spawn," as it is usually called, is kept in the form of bricks, made of horse manure, cow dung, and loamy mold, in which a little of the spawn has been inserted, and through which it has spread. These bricks are kept on sale by the large seedsmen, at a sixpence or so each. The spawn is often found in old horse manure, in the form of small white threads running through the mass. For full directions see *Agriculturist* of last September.

NEW LARGE FLOWERING GERMAN STOCK, (J. WESLEY JONES' COLLECTION, No. 4.)
(Engraved for the American Agriculturist.)

The above engraving is as fair a representation as can be given (without the beautiful colors,) of a well-grown specimen of this plant, recently exhibited at the office of the *American Agriculturist*, by Mr. Jones of Chatham 4 Corners, N. Y. If regularity of form were indispensable in the structure of a flower, to allow it to be called beautiful, then certainly the German stock would not be admitted to that class. But fortunately, some things are beautiful that are not symmetrical. The species here represented, the *Mathiola annua*, produces more varieties than all the other species together. It is a native of the South of Europe, and is usually found growing near the sea shore. The principal varieties now in cultivation have originated in Germany, from which country we obtain our seed. This seed produces flowers ranging from the purest white to the darkest purple. To secure very early flowers, the seed should be sown in March in a hot-bed, or in a box or pot in the house. The soil in which they are sown should be finely pulverized and moderately rich. Cover the seed about one-quarter of an inch deep, and when the plants have grown an inch or so high, they should be thinned if too thick, and as much air given them as possible, but not enough to check their growth. If thinning and airing is not attended to, they are very likely to damp off, as it is termed by gardeners. As soon as the weather has become warm, they should be transplanted into the open ground, always taking a damp day for the operation if convenient. For later flowers, or general culture, sow the seeds in drills in the open ground, being careful to have the soil finely pulverized, and not to cover the seeds too deeply, or let the soil get baked or dry, as this will prevent the seeds from growing. When the plants have made their third or fourth pair of leaves, if they then stand too thickly, a portion of them should be pulled out, leaving them eight or ten inches apart. The plants thinned out may be transplanted elsewhere, with moderate care. The seeds are quite abundant. We had them in our distribution list formerly, but left them off for those more novel, or less generally to be obtained. If desired, they can come in again next year.

Chinese Wistaria—Beautiful.

One of the best perennial ornamental vines, is the Chinese Wistaria, (*Wistaria Sinensis*). It is found native in China and Japan, and when first brought to this country, was named *Wistaria*, in honor of Dr. Wistar, a well-known botanist of Philadelphia.—It is a very rapid grower, often making shoots from six to ten feet in a single summer. It blooms profusely; and, singularly, the flowers appear in the Spring before the foliage is fully developed. These flowers are quite fragrant, and appear in large, hanging masses like clusters of grapes, or more exactly, like locust blossoms six or eight inches long. Each flower in the cluster is shaped like the pea-blossom, and is of a pearly-lilac color. Last May, we noticed a vine covering a space ten by twenty-five feet, on which we counted four hundred and sixty clusters of flowers! While the plant is young, and making very rank growth, the wood is apt to die back somewhat in the Winter; therefore it should be laid down in the Fall, and covered with a little litter. When it gets well established, it is hardy enough for anybody.—There is scarcely a situation for which it is not appropriate. For town houses it answers well to cover blank walls. We have often seen it in this city, clambering up the sides of buildings, fifty or sixty feet high, twining around lightning rods and conductors, creeping along the cornice, and nodding its blooms around the garret windows. It is also a good vine for covering bowers and arbors, or the pillars of a piazza, for clothing a high fence or the trunks of trees. It is sometimes used for training to the posts and rafters of green-houses, in which places it blossoms several times a year. It may be trained into a bushy pole plant, by frequent pruning; and when so trimmed, it flowers oftener than when allowed to run. There are two other varieties, the *rosea*, and the *alba*; yes, and a third, the *violacea*, with denser racemes, variegated flowers, and with a shade of yellow, violet, and rosy purple. The last blooms later than any other species.—Plants, to begin with, can now be cheaply obtained of most nurserymen (25 to 35 cents each.) Nothing is easier than the propagation of this vine. Bend down a shoot in June, bury it three or four inches, at several buds, wounding the bark a little, and roots will soon form. But bear it in mind, not to propagate from an old shoot covered with flower-spurs: such a plant will never do well. Take a fresh, young cane, and success will be quite certain.—As an illustration of the high value put upon the Wistaria by our English friends, take the following from the London *Cottage Gardener*: "We would select the Wistaria in preference to a pillar-rose, and would prepare a border for it, as we would for a grape vine, in every particular. . . Our pillar Wistaria should be pruned exactly like a pear pyramid."

Cheap Home-made Glass Cases for Growing Plants.

"Elsie" inquires for "the cheapest possible case for growing a fern or two." The writer has somewhere seen a plan like this proposed: Take four of the largest panes of window glass you can find, bind each of them at the edges with wide linen tape, drawing the tape over the edges of the pane firmly, and sewing it down. When all have been bound, sew the ends together, four square. This will give you a glass box having neither top nor bottom. Now set out the ferns or other plants in a neat wooden box, an inch larger all around than the glass case. Set your case over this, and for a cover, lay on a pane of glass, open at the edges a trifle, to admit air.

Here is another hint: Get at the crockery-store one or more bell-glasses or shades, such as are often used for covering bouquets of artificial flowers. Then provide a flower-pot of some handsome pattern, the diameter of which is about a quarter of an inch larger than that of the glass. Now, fill the pot with sandy loam and a little leaf-mold, and set out in it one of the lycopods or lichens which are often found in green-houses. Cover the same with the glass shade, and forget not to water it occasionally. The plants will soon grow, and ere long fill the bell-glass with their fine and beautiful foliage. This is very pretty as an ornament for a lady's sewing-table in Winter. A student's window, near where we now write, is graced with one of them.

Plants Protected from Frost by Water.

Dingler's Journal (German) states, as a new discovery, that a few pails of water set among in-door plants, which are liable to injury from freezing, will protect them perfectly in quite severe weather.—This is no new discovery, but has long been practiced. Water, when passing from the liquid to the solid or frozen state, gives out a large amount of heat that was previously latent. A considerable body of water would thus keep a room sufficiently warm to prevent the destruction of many plants only half hardy. But with only a small quantity of water, or when the cold is intense, the juices or water in the fibers of the plants will congeal, and by its expansion destroy the organization, and induce disease and decay.

The Dove Flower—(*Peristeria alata.*)

Within the past few years, this beautiful plant has been admired by thousands of our countrymen while passing across the Isthmus of Panama, on their way to or from the gold fields of California. Its chief beauty consists in the form of the central portion of the flower, which resembles a white dove, with out-stretched wings, just settling into its nest of white satin. The little beak of this imaginary dove is tipped with carmine, and its wings are slightly speckled with purple. The flowers are produced on a stem two to three feet high, and continue in bloom a long time, emitting a delightful fragrance. No one, after seeing this curious plant in bloom, will wonder at the early Spanish settlers naming it Espiritú Sancta, or Holy Spirit. These fanciful and superstitious people were ready to seize upon every object, that would in any way contribute to strengthen a belief that God manifested himself to them more than to any other people. The natives of Panama, seeing the Spanish worshipping this humble plant, soon began to look upon it with veneration, and now believe there is sanctity in its very fragrance. It belongs to the family of the orchids, many of which are air plants, and is found growing in low, marshy ground, upon old decayed wood and bark mixed with earth.—A friend of ours sent us, a few years since, a dozen of the bulbs, with a box of soil in which they were found

growing. This soil was composed of decayed vegetation, mixed with a large proportion of soft stone, resembling half burned brick. The bulbs were potted in this soil, covering the lower end about one inch. They received very little water until they showed their flower stems, which was in two or three weeks, and were then watered quite freely, until they were done blooming, and the bulbs were mature, at which time water was withheld, and the bulbs were allowed their period of rest. To grow this plant successfully, requires a temperature of 85° to 95°, and a humid atmosphere.—Soft bricks, broken up into small pieces, mixed with moss and a little sandy peat, is a good soil for them. Put two or three bulbs into an eight inch pot, and keep them shaded from the direct rays of the sun. They are sold by most of the leading dealers in plants. Many keep them growing in pots of earth, on sale, at $2 to $3 each.

Newspapers Good for Bed Blankets.

The present cold weather, the high price of cotton used for quilts and "comforters," and the recent increased cost of wool adapted for blankets, all suggest to us to remind the readers of the *American Agriculturist* that common newspapers make a very good addition to the bed covering. Several papers can be pasted at the edges to form a large single sheet, to spread on the outside of a bed or even under the outside cover. The paper itself is a good non-conductor, and aids to retain much of the heat that would otherwise escape. A much more effective covering is made by placing two of the large pasted sheets together, and fastening them at the edges, and at a few other points. The thin space of air between the sheets is an admirable non-conductor. A cover of this kind is quite as effective as a closely woven woolen blanket. We have heard of an over-coat lined with paper stitched to the inside. Those who have not tried it will be surprised at the effectiveness of these bed coverings, which can be prepared in a few minutes from newspapers that would otherwise go to waste. (Of course no one would think of spoiling the *Agriculturist* by using it thus.)

For the American Agriculturist.

Hints on Dressing and Roasting a Turkey.

A turkey is one of the daintiest dishes, and in some parts of the West a commoner one than roast beef. Much, however, depends upon the manner of cooking. I well remember "fixing" my first turkey. I had had servants to do such things, until I was a woman grown, and (like other foolish girls) I never troubled myself to learn "how to stuff a turkey," until I had to do it from necessity.....When Jonathan brought home that first turkey, I was perfectly helpless, and was actually obliged to send for a neighbor to show me what to do with it. She was an old English cook, whose superior I never knew—at least so far as dressing a turkey is concerned. "It must hang up by the heels," she said, "for half an hour after the head is chopped off, for all the blood to drip out. Then lay it in a large dish pan, and saturate one half of it with water nearly boiling, and while stripping the feathers off the warm parts, have the other side down in the water heating. It should be singed before the entrails are taken out—and the flame of paper is preferable to that of straw for singing.

The stuffing—The liver, heart, gizzard, and neck, together with the sheet fat, are then washed, put down in a pot, and boiled for an hour or more, after which the meat is transferred to a chopping board, and made as fine as mince meat. The soup obtained from these parts, having been poured on the bread destined for stuffing, (stale bread is best, as it will crumble down easily), a little ground sage, pepper, and salt, with a couple of beaten eggs, are added to the mixed meat and bread, and the stuffing is ready. If the turkey has no extra fat to spare for stuffing, a piece of beef suet, about the size of a small teacup, is an excellent substitute, chopping it very fine, however.

After stuffing the turkey, sew up the apertures with a coarse needle and thread, and if the fowl is not young, parboil it before roasting. Some slices of fat beef or pork, laid under and above the turkey in the frying pan, will save the trouble of basting, and keep the meat juicy. A little water must be added to the pan from time to time, to keep the temperature below the frying point. Onion gravy is generally liked. For one cup of dripping or fat, two cups of boiling water is the allowance, together with a finely chopped onion, and two tablespoonfuls of flour. The flour better not go in until the onion is cooked. It should also be mixed with cold water. Use pepper and salt according to taste in the gravy, and also a little inside and outside of the turkey before stuffing.

Mrs. M. J. S.

Fair Haven, Ill.

"Clinker" in Stoves.

If only the first quality of coal be used, there will be little trouble from "clinker" fastening upon the sides of the stove. It is composed of various mineral impurities which are melted by the intense heat, and hardened by contact with the cooler lining of the stove. Care is needed in storing the coal in the cellar or other place, that no sand be intermixed, as this will cause clinker. The silex of which the sand is partly composed, and the potash of the ashes unite, and form a glassy substance, which adheres very tenaciously to iron or brickwork. If a stove becomes clinkered, place a few oyster shells in the fire close to the clinker. By repeating this process a few days the clinker will be loosened so as to be removed easily without breaking the lining. So says a correspondent.

Churning in Winter.

The frequent inquiries for a sure method of always churning butter as quickly and of producing as good an article in summer,as in winter, we can not well answer, for the substantial reason that we know of no such method. Good mixed feed for the cows, keeping the milk and cream from freezing, and bringing the cream to a proper temperature before beginning to churn, comprehend about all we can say on the subject. A "Subscriber," a lady, at Locust Valley, Queens Co., N. Y., communicates to the *American Agriculturist* her method of making butter in winter, which she thinks far surpasses any other plan she is acquainted with. She writes that "by this method the full quantity of butter is obtained, the quality is equal to that of grass butter, the buttermilk is rich and remains sweet for drinking, or for culinary purposes, such as making rice puddings, and the process is certain and simple, and attended with little trouble. It is as follows: The cream is skimmed each day, and placed at once in a kettle, and the kettle put into hot water (to prevent scorching), and put over the fire. The cream is allowed to scald, without boiling. It is then put into a vessel, and set aside; each day's cream being in like manner scalded, and added to the mass, until enough for a churning is obtained. The churning is commenced immediately after adding the last day's cream, which brings the whole to a proper temperature, without thinning by the addition of hot water."

More of the Corn Bread Exhibition—Fifty-four Recipes.

In January we gave a general report of the late Exhibition of Corn Bread, at the Office of the *American Agriculturist*, with the list of the exhibitors, and the directions for making the specimens of bread and cake, to which the premiums were awarded. It will be remembered that the Judges were limited by the conditions of economy, and adaptation to general use for every day diet. There were many specimens, both of corn bread and corn cake, which were superior in point of beauty and taste to those receiving the prizes, but which were not ranked first—either on account of being less economical, or less easily made, or because the specimens exhibited chanced to be not so good as would be implied by the directions, from some chance failure in the baking. But there were at least one hundred specimens which would honor any table, and would please the taste of ninety-nine persons out of every hundred. We present below the directions accompanying a considerable number of specimens, which were specially commended by the Judges. From them it will not be difficult for every family to select several kinds that will be found well adapted both to circumstances and taste. We may add here, that a number of the best loaves of bread and cake rapidly disappeared, so great was the desire of the multitude of visitors to "taste just the smallest bit." This we could have endured, though it deprived us of even a taste of them, but we found, after a time, that not only had the visitors eaten up many good loaves of bread and cake, but they had also carried off the accompanying recipes, as these were left with the several specimens. This was probably done thoughtlessly in some cases, and ignorantly in others, but it deprived others of the benefit of having the recipes published. We would respectfully solicit from the contributors another copy of the recipes accompanying the specimens, numbered in our report last month as follows: Nos. 8—11—21—39—40—44 47—60—75—121—151—158—162—167—170—171.—While we give the Committee of Judges credit for having faithfully and laboriously performed their duty, we fear that owing to the great number of specimens to be examined, some may not have received their due award of merit. Owing to our constant occupation with the visitors, and with the general oversight, we could not accompany the committee in their rounds. We append to the recipes below, in abbreviated form, extracts from the note book of the Judges. [☞ We give now all that room can be spared for. Others will be given hereafter, with some very good recipes recently received from those who did not exhibit.]

No. 1. Brown Bread.—By Mrs. D. R. Pope, Susquehanna Co., Pa. Two quarts corn meal, and 1 of rye, mixed well together, the rye to be unbolted but sifted through a common seive; add ½ pint yeast, a teacupful molasses and a little salt; pour in warm water until thoroughly wet; then dip the mixture into the baking pan; wet the hand and smooth over the top; set it in a warm place to rise; bake 2 hours. (*Com. Notes:* "Good.")

No. 3. Corn Meal Bread.—By Mrs. Louis C. d'Homergue, Middlesex Co., N. J. Recipe with cost. 1½ lbs. corn meal at 2 cts. per lb., [3 cts.]; ¼ lb. wheat flour at 3 cts. per lb. (¾ ct.]; 4 eggs at 1¼ cts. each, [5 cts.]; 1 tablespoonful butter, [½ ct.]; 2 tablespoonfuls saleratus [½ ct.]; 1 quart sour milk; total 9¾ cts. (*Com. Notes:* "Light, fine in appearance, too much alkali.—Nos. 2. and 4 by the same contributor were good and very economical.")

No. 10. Yankee Bread.—By Mrs. H. W. Ransom, Warren Co., N. Y. Two and a half pints corn meal, ½ pint flour, ½ teacupful hop yeast, 1 tablespoonful salt, 3 pints water, set 1 hour to rise; bake 2 hours. Rye flour is preferable to wheat for mixing with corn meal. (*Com. Notes:* "Good quality, but rather hard baked, and hardly light enough.")

No. 15. Rhode Island Brown Bread.—By Mrs. John R. Fales, Rhode Island. One quart coarse Indian meal, 1 pint rye flour, ⅔ cupful molasses, 1 teaspoonful each of saleratus and salt; mix with hot water, thin enough to pour. Bake 3 hours. (*Com. Notes:* "Light, well baked, sweet and good.")

No. 18. Corn Bread.—By Mrs. H. Sinclair, Monmouth Co., N. J. Scald 1 quart corn meal with sufficient boiling water to make a stiff dough; add 1 teacupful yeast, 1 teaspoonful salt; set in a warm place to rise; when light, add 2 well beaten eggs and ½ teaspoonful soda; put it in well buttered tins, and bake 1 hour. Good 3 days old. (*Com. Notes:* "Nice looking; economical, pretty good.")

No. 19. Corn Meal Buns.—By Mrs. H. Sinclair, Monmouth Co., N. J. One pint sweet milk, lump of butter size of a walnut, 1 teacupful sugar, 1 egg, 1 teaspoonful soda, 1 teacupful yeast, a little salt, spice to taste; when light, mold into cakes, with sufficient wheat flour to prevent the dough sticking to the hands. Bake 1 hour. (*Com. Notes:* "A fair article, good when hot, for breakfast or tea.")

No. 20. Corn Meal Bread.—By Mrs. H. Sinclair, Monmouth Co., N. J. To 1½ lbs. corn meal, scalded with sufficient boiling water to make a stiff dough, add 1 teacupful yeast and a little salt. Put it into a quick oven when light, and bake 1¼ hours. (*Com. Notes:* "Not of best quality, but good for an article so economical.")

No. 22. Rye and Indian Loaf.—By Mrs. C. B. Mince, New-London Co., Conn. 2¼ lbs. corn meal, 9 ounces rye meal, ½ teacupful yeast, 1 tablespoonful molasses, 1 quart skim milk, 1 quart water. Bake 3½ hours in stove. (*Com. Notes:* "Light, well baked, very good.")

No. 25. Corn Bread.—By Mrs. Lott Cornelius, Queens Co., N. Y. Into 3 quarts of skim milk, scalding hot, stir 2 quarts of new corn meal; add 1 large teaspoonful of salt, 1 of ginger, and 1 gill of molasses; greese a pan with good sweet lard, put the mixture in; make it smooth and level, pour milk over the top to prevent a hard crust, and bake 4 hours in a moderately heated oven. This like all other preparations of corn meal is decidedly better eaten hot. If to be eaten hot I would add another pint of corn meal. (*Com. Notes:* "Very cheap, and decidedly good.")

No. 32. Indian Doughnuts.—By Mrs. E. Blake, Middlesex Co., Conn. Stir 2 teacupfuls of Indian meal in 1½ cups of boiling milk. When sufficiently cooked add 2 cups wheat flour, 1 cup butter, 1½ cups sugar, 2 eggs, 1 grated nutmeg, and a little salt and yeast. Should the dough be too soft, thicken with equal quantities of meal and flour. When perfectly light, roll to ½ inch, and boil in lard. (*Com. Notes:* "Fine appearing, good, not cooked enough for corn meal.")

No. 33. Corn Bread.—By Mrs. A. O. Wilcox, New-Haven Co., Conn. To 1 pint corn meal, add 1 pint boiling water, ½ pint hop yeast, a little salt; then work in 1 pint of dry meal and wheat flour enough to mold it up, and when light add ½ teaspoonful of soda, and 1 teaspoonful cream of tartar. Bake 2 hours. (*Com. Notes:* "Good, though it appears to have been baked a little before sufficiently risen. Economical.")

No. 36. Brown Bread.—By Hannah G. Snow, Camden Co., N. J. Three pints rye meal, 1½ pints corn meal, ⅔ teacupful molasses, 1 cup yeast, 1 teaspoonful each of salt and soda; mix thoroughly with warm, but not scalding water, into a rather soft dough; set it to rise over night, bake in a slow oven 2½ hours, in iron, earthen, or tin pans—iron is best. (*Com. Notes:* "Evenly baked, light, good.")

No. 42. Corn Bread.—By S. B. Pettit, Gates Avenue, Brooklyn, N. Y. One quart milk, 6 eggs, salt, sugar to taste, 7 parts corn meal, 1 part flour, 2 ounces Durkee's Baking powder, mix dry, then mix all together. Make a stiff batter, and bake in pans 30 minutes. If no baking powder is used, use sour milk instead of sweet, and saleratus or soda. (*Com. Notes:* "Very superior. Thinish loaf,-as it should be, to be easily baked. This sample remarkably well baked.)

No. 45. Corn Cake.—By Mrs. S. J. Pine, Hauppaug, Suffolk Co., L. I. One and a half pints corn meal, ½ pint wheat flour, 2 teaspoonfuls cream of tartar, 1 teaspoonful soda, 2 eggs, ½ pint molasses, skim milk enough to make a stiff batter, flavor with nutmeg and ginger, and bake at once for about ¾ hour. (*Com. Notes:* "Decidedly good.")

No. 49. Corn Bread.—By Mrs. L. I. Prime, Queens Co., N. Y. Five cups corn meal, 1 cup wheat flour, 4 cups water, 2 tablespoonfuls sugar, 2 of yeast, and 2 tablespoonfuls of salt. (*Com. Notes:* "Very good.")

No. 50. Corn Bread.—Mrs. S. Haviland, Westchester Co., N. Y. Three teacupfuls corn meal scalded with water, ½ cup yeast made of rye flour; stir well together; set away to rise; when light, add ¾ cup wheat flour; then set away to rise again. Bake 2 hours. (*Com. Notes:* "Very good.")

No. 52. Corn Bread.—By Mrs. S. Overton, Suffolk Co., N. Y. One egg, 1 gill sugar, 1 pint buttermilk, and a little soda. Thicken with sufficient corn meal to make a stiff batter. Bake 35 to 40 minutes. (*Com Notes.* "Very good indeed.")

No. 55. Corn and Rye Loaf.—By M. A. H. Rowe, Columbia Co., N. Y. In 3 pints boiling water stir 5 pints corn meal, 1 pint rye flour, 1 cup molasses, 1 cup yeast, and 1 teaspoonful salt. Bake 1 hour, better in a brick oven, and it is well to have it remain in the oven over night. (*Com. Notes:* "A large and very fine loaf; other samples from the same source good.")

No. 59. Pumpkin Loaf.—By Mrs. C. W. Powers, Dutchess Co., N. Y. To 2 quarts Indian meal add 3 pints stewed pumpkin, while scalding hot, and work them together with a strong spoon; when cold, add ¾ pint wheat flour, 1 teacupful milk, 1 cup hot yeast, ½ cup molasses, 1 teaspoonful of salt, and stir well together. Put the mixture into a deep baking pan (iron preferable). When light, bake at a moderate heat 3 hours. If baked in a brick oven, let it stand over night, for a warm breakfast next morning. (*Com. Notes:* "Light, well baked, good. Other samples from the same source, excellent.")

No. 61. Corn Bread.—By Mrs. P. Knox, Westchester Co., N. Y. Two quarts corn meal, 1 pint flour, 3 pints buttermilk, 3 teaspoonfuls soda, 3 tablespoonfuls molasses, 2 of salt. Put the flour, meal and salt together; dissolve the soda in a little hot-water; put in the buttermilk and molasses; then mix with the hands, and bake 2 hours. (*Com. Notes:* "Light, well baked; too much soda and salt. The use of too much alkali is a common fault with the specimens on exhibition.")

No. 62. Corn Bread.—By Sarah J. Fanning, Suffolk Co., N. Y. To 3 cups corn meal, add ⅔ cups wheat flour, ½ cup yeast made of corn meal, 1 teaspoonful salt, 2 tablespoonfuls molasses. Mix with sweet milk to thick batter; let it stand until light; then bake slowly 2 hours; wrap it in a cloth wet with cold water, and let it sweat until cool. (*Com. Notes:* "Extra light, well baked, good quality.")

No. 77. Corn Cake.—By Mrs. D. G. Henry, Addison Co., Vt. Half pint Indian meal, ⅔ teacup wheat flour, 1½ cup sugar, 2 eggs, 2 spoonfuls melted butter, ½ cup cream and sour milk, ½ teaspoonful saleratus.

(*Com. Notes:* "Very good. Other samples from same contributor good also.")

No. 78. Corn Loaf.—By Adeline C. Belknap, (address not given). Two quarts corn meal, with milk enough to scald it, 1 pint wheat flour, 1 tablespoonful salt, 3 tablespoonfuls each of molasses and home-made yeast; mix well together, and let it rise about 2 hours. Bake in a slow heat, and let it stand in the oven over night. (*Com. Notes:* "Light, well baked, pretty good.")

No. 91. Corn Cake.—By Mrs. D. E. McAuley, Fairfield Co., Conn. One teaspoonful soda, ½ cup butter, 2 cups sugar, 3 cups corn meal, 4 eggs, 1 teaspoonful salt, 1 cup milk, ½ nutmeg. Bake 1½ hours. (*Com. Notes:* "Very good, well baked, remarkably light; economical.")

No. 95. Johnny Cake.—By Mrs. C. F. Moeller, Fairfield Co., Conn. Five cups corn meal, 1 cup wheat flour, 3½ cups buttermilk, 2 tablespoonfuls molasses, 1 teaspoonful salt, 1 of saleratus, a very little ginger. Bake 2½ hours, with a tin cover to prevent the crust burning. (*Com. Notes:* "Well baked, light, very good.")

No. 100. Indian Pound Cake.—By Sarah S. K. Mansfield, New-Haven Co., Conn. Take 1⅔ teacupfuls corn meal, ⅔ cup wheat flour, 2 cups sugar, 4 eggs; 1 teacupful shortening (half butter and half lard); season with nutmeg and cinnamon. Bake ¾ hour. (*Com. Notes:* "Rather too much shortening, but yet good. Corn meal, being naturally oily, no more shortening should be added than is absolutely necessary.")

No. 101. Corn Loaf.—By Dora B. Robinson, Kings Co., N. Y. Two quarts yellow corn meal, 2 tablespoonfuls melted butter, 2 teaspoonfuls salt, 2 quarts milk, or water, or an equal quantity of both, 2½ teaspoonfuls soda; mix all together and bake in a moderately quick oven 1½ hours. (*Com. Notes:* "Pretty good, but a little injured by too much soda.")

No. 103. Corn Cake.—By Mrs. R. W. Mathewson, Middlesex Co., Conn. Five cups corn meal, 1 cup wheat flour, 3 cups milk, 1 cup cream, 1 egg, a little salt, 1 teaspoonful saleratus, and 2 of cream of tartar; bake in shallow pans 1 hour. (*Com. Notes:* "Good, apparently too much cream of tartar.")

No. 105. Corn Bread.—By Mrs. J. H. Fullerton, Yorkville, N. Y. Two coffee cups sweet milk, 1 egg, 2½ coffee cups corn meal; mix well together, adding 2 teaspoonfuls cream of tartar, 1 of soda, 1 of salt, 2 tablespoonfuls molasses. (Put in the ingredients in the order named.) Bake 1 hour in a quick oven. (*Com. Notes:* "Well baked, quality good, other samples from same contributor good.")

No. 110. Corn Bread.—By Mrs. Barnes, Kings Co., N. Y. One quart corn meal, 1 quart boiling water, and a little salt. Mix and bake in shallow pans from 1 to 2 hours. (*Com. Notes:* "Cheap and good. Other samples from the same source worthy of like praise.")

No. 119. Rye and Indian Bread.—By J. G. Dennis, Newport Co., R. I. Two parts sifted corn meal, 1 part rye flour, 1 teaspoonful salt, 1 teaspoonful saleratus, 1 tablespoonful molasses; mix to a stiff dough with 1 part water to 2 parts milk. Bake slowly 5 hours. (*Com. Notes:* "Very good; recommended.")

No. 123. Corn Cake.—By Mrs. John Allison, Orange Co., N. Y. One pint thick buttermilk, (sour milk of any kind as good), 1 teaspoonful best saleratus, 3 tablespoonfuls molasses (more if preferred), 2 tablespoonfuls wheat flour, 1 pint yellow corn meal, (white will not do). Mix and bake immediately in square tins about an inch deep, with moderate fire, 1 hour or more. (*Com. Notes:* "Very good.")

No. 126. Brown Bread.—By Mary A. Castle, Herkimer Co., N. Y. Five teacupfuls corn meal, and 1 cup wheat flour wet with warm water, 1 spoon salt, ½ cup syrup, 1 pint bread sponge, to stand till light, and then to be baked with slow heat 3 hours. (*Com. Notes:* "Light, well baked, excellent.")

No. 127. Corn Meal Bread.—By Emily A. Tanner, Rockland Co., N. Y. Three gills sour milk, ⅛ ounce saleratus, ⅓ ounce salt, 2 eggs, 3 ounces wheat flour, 15 ounces corn meal. Beat the whites and yolks of the eggs separately; add the yolks to the salt; dissolve the saleratus and beat with the sour milk until it foams; then pour together and stir well; add the meal and the flour sifted; and lastly add the whites, which should be beaten to a stiff froth, stirring all the time. Pour into a buttered basin and bake 1½ hours. Estimated cost as follows: sour milk .038, saleratus .008, salt .002, eggs .266, wheat flour .056, corn meal .187—amounting to .557=total cost a fraction over 5½ cents. Weight of bread 1 lb. 10½ ounces. (*Com. Notes.* "Rather heavy, but sweet and good.")

No. 130. Corn Bread.—By Emma L. Freeman, Harlem, N. Y. One pint corn meal mixed with 2 pints cold water, stirred into 3 quarts of boiling water, to make a thin mush; add 1 tablespoonful salt and boil ½ hour; when cool stir in 4 pints corn meal, 2 tablespoonfuls molasses, and 1 yeast cake. Bake in a moderately hot oven 2½ hours. (*Com. Notes:* "All Indian meal, and good; 1-5th flour would doubtless have made it better.")

No. 131. Corn Cake.—By Emma L. Freeman, Harlem, N. Y. One quart corn meal, ½ pint wheat flour, 2½ pints warm water, 2 eggs, 1 to 2 teacupfuls molasses, 2 teaspoonfuls cream of tartar, and 1 teaspoonful each of soda and salt. Mix the cream of tarter and soda into the flour and meal; sift it all in a basin, heap it up around the sides, leaving a hole in the middle, beat the eggs very light and pour them into a basin with molasses; beat them together 5 minutes; then pour in the water and salt and stir all together well. Bake in deep pans 2 hours, in a hot stove oven. (*Com. Notes:* "Of excellent quality, but apparently not baked enough. Bread from the same contributor, good.")

No. 133. Corn Loaf.—By Mrs. R. W. Cooley, Broome Co., N. Y. One pint boiling water, 1 teaspoonful salt, 1 teaspoonful brown sugar, and a piece of butter the size of a hickory nut; let it stand till cool, which forms the yeast. Then stir in flour to make it thick; set it in a dish of warm water and stir very often until it begins to rise; then put 5 cupfuls corn meal into a pan, and add 2 teaspoonfuls salt, 1 of ginger, 3 of molasses. Pour on boiling water; sufficient to scald the meal, but not to make it thin. Let it get cold, so that it will not scald the yeast, and add 1 teacupful of the yeast and 1 of flour, and 1 teaspoonful saleratus; mix thoroughly, put into pans and bake 1 hour. The above will make two loaves, good when five days old. Would be better with more flour. (*Com. Notes:* "Very good, light, well baked, sweet.")

No. 147. Corn Bread.—By Mrs. Lucy W. Kimball, New-London Co., Conn. 1¾ lbs. corn meal, 6 oz. pork scraps, 1 teaspoonful cooking soda, ½ teacupful molasses, 1 quart sour milk, 1 teaspoonful salt; mix cold and bake. (*Com. Notes:* "Light, well baked, fair quality.")

No. 151. Corn Bread.—By Mrs. M. C. Walker, Middlesex Co., Mass. Four cupfuls corn meal, 2 cups flour, 4 cups buttermilk, 2 tablespoonfuls molasses, 1 teaspoonful saleratus, 1 of salt; bake with a moderate fire 1½ hours. N. B.—Less flour would cause the bread to crumble in cutting. (*Com. Notes:* "Light, nice, good.")

No. 152. Corn Bread.—By Mrs. M. C. Walker, Middlesex Co., Mass. Five cups corn meal, 1 cup flour, 1 cup yeast, 4 cups water, 2 tablespoonfuls molasses, 1 teaspoonful each of saleratus and salt; set to rise 5 hours, then pour into baking dish, and allow to rise again ½ hour. (*Com. Notes:* "Well baked, nice, recommended.")

No. 155. Two Corn Loaves.—By R. McDonald, Fulton Hotel, New-York City. Two lbs. corn meal, 1 lb. flour, 1 quart milk, ¼ lb. butter, ¼ lb. sugar, 2 teaspoonfuls cream tartar, 1 of soda. (*Com Notes:* "Light, well baked, very good.") We can personally endorse the committee's report that these were very good.—Ed.

No. 163. Corn Bread.—By Mrs. M. C. Turner, New-York City. Four cups meal, ½ cup flour, 2 cups water, 1 cup yeast, 1 spoonful sugar, 1 teaspoonful soda, 1 of salt. Place near the fire to rise quickly. Bake 1½ hours. (*Com. Notes:* "Very nicely baked, light, good.")

No. 164. Sweet Corn Meal Cake.—By Mrs. M. C. Turner, New-York City. One cup of sugar, 1 cup milk, 1½ cups corn meal, ½ cup flour, a piece of butter of the size of an egg, 1 teaspoonful ginger, ½ teaspoonful soda, 2 eggs. Bake ¾ hour. (*Com. Notes:* "Well baked, light, of fair quality. Other samples from same contributor good.")

No. 174. Corn Cake.—By Mrs. W***, New-York City. One quart corn meal, 1 pint milk, 4 eggs, 1 cup sugar, ½ cup butter, 1 cup stoned raisins, 1 teaspoonful salt, ½ teaspoonful mace, 1 teaspoonful cinnamon, ½ teaspoonful allspice; stir in enough meal to thicken a pint of milk, adding the butter and salt; when they are well mixed, pour into a pan, and add the sugar; when nearly cold, add the eggs and spices, and the raisins, if desired. Bake in a well buttered pan 2 hours. (*Com. Notes:* "Not quite baked enough; otherwise good. The other sample, presented by same contributor, very good.")

No. 177. Corn Bread.—By Mrs. Davis, New York City. One cup sour milk, 1 cup corn meal, 2 tablespoonfuls flour, 1 teaspoonful of sugar, ⅓ teaspoonful soda; all made in five minutes, and baked in 20 minutes. (*Com. Notes:* "Very good.")

No. 181. Corn Bread.—By E. F. P., Queens Co., N. Y. Take 2 pints of corn meal; boil one pint in a pint of water 5 minutes; when cool, add ½ pint water, 1 cent's worth of yeast, 1 teaspoonful salt, 1 pint wheat flour, and the remaining pint of corn meal; set in a warm place to rise; when sufficiently light, bake in a hot oven 1 hour. (*Com. Notes:* "A fair loaf.")

N. 184. Corn Bread.—By Mrs. L. Ryerson, Passaic Co., N. J. Two quarts corn meal, 2 quarts boiling water, 1 tablespoonful salt; mix well together and leave to cool so as not to burn the hands; then knead in with the whole of the above a yeast cake dissolved in a teacupful of warm water, and ⅔ of a pint of wheat flour; set in a warm place until small cracks appear. Bake 1¼ hours. (*Com. Notes:* "A fine loaf, only not baked quite enough.")

No. 185. Loaf of Cake.—By Mrs. L. Ryerson, Passaic Co., N. J. Two teacupfuls each of sugar and butter, mashed together; 2 eggs well beaten and mixed with the sugar and butter; 2 teacupfuls sweet milk; a heaped teaspoonful of cream of tartar; 1 even teaspoonful of saleratus, mixed in 2 teacupfuls of wheat flour, and 2 teacupfuls of Indian meal; the whole to be mixed well together and baked 1 hour. (*Com. Notes:* "Very nice.")

No. 186. Corn Bread.—By Mrs. Geo. S. Wales, Monroe Co., N. Y. To wheat bread dough enough for a loaf, when light and nearly ready to be put on the pans for the last rising, add 2 quarts of corn meal, scalded in water enough to make a stiff batter; add 1 tablespoonful salt, and 1 cupful of molasses. When cooled, mix it with the bread dough, working in at the same time rye flour enough to make it into loaves as stiff as wheat bread. Put into pans and keep in a warm place until light and ready for the oven. A slow oven is best, and a longer time is required for baking than for wheat bread. This quantity makes four loaves. (*Com. Notes:* "Light, well baked, very good.")

No. 194. Corn Bread.—By M. A. Park, Fairfield Co., Conn. Scald 3 pints of corn meal with 1 quart of milk; let it stand over night; stir in 1 cup wheat flour, 2 tablespoonfuls molasses, 1 teaspoonful salt. Bake 1½ hours. (*Com. Notes:* "A fair loaf.")

No. 195. Corn Cake.—By M. A. Park, Fairfield Co., Conn. One cup molasses, 1 cup sugar, ¾ cup butter, 3½ cups corn meal, 1 cup flour, 3 eggs, 1 pint milk, a small teaspoonful of soda; spice to taste. This makes two loaves. (*Com. Notes:* "A fine sample.")

No. 206. A Good Corn Loaf.—By Mrs. E. A. Coon, Stark Co., Ill. One quart sour milk, 2 eggs, 1 tablespoonful each of salt and lard, 1 teaspoonful soda; stir to a stiff batter with a spoon. Bake in a quick oven ¾ hour. [*Editor's Note.*—This and No. 207, came all the way from southern Illinois ("Egypt"), and arrived after the judges left. We kept them a week longer, and in our own judgment, as well as in that of many others who tried them, they were quite palatable when two weeks old. We are glad that there is "plenty of corn in Egypt," and that there is one, at least, who knows how to cook it so well. We advise others to do likewise. Anybody who would pine on Nos. 206 and 207, ought to go hungry—if not starve.]

No. 207. A Cheap Corn Loaf.—By Mrs. E. A. Coon, Stark Co,, Ill. Pour 1 quart of boiling water on a quart of corn meal; stir together, and let it stand until cool; add half a teacupful of good, sweet hop yeast, and a tablespoonful of salt. Bake in a quick oven.

No. 220. Brown Bread.—By Mrs. R. B. Neal, Tuftonboro', N. H. Three quarts Indian meal, 3 pints wheat middlings, sifted and well mixed, and 2 quarts of milk. If the weather is cold, add 1 pint of boiling water, if warm, 1 pint of the milk instead of the water, and if sweet milk is used, dissolve in it 2 teaspoonfuls saleratus or soda, but if the milk is sour, use sufficient to remove the acidity. Mix well and let it stand an hour or two before baking; then bake well, (in a brick oven, if convenient,) and it is better if left in the oven over night. This bread will keep long, and when steamed is as good as new. Yeast or yeast powders can be used instead of saleratus or soda, if preferred. The above will make one large or two small loaves, and, if properly done, can not fail to please any lover of brown bread. It has proved good for nearly twenty years. (*Rep. Notes:* "Excellent.")

"GLORIOUS WINTER."
Engraved for the American Agriculturist.

The Editor with his Young Readers.

A PRETTY LARGE COMPANY—CURIOUS FIGURES.

As the teacher of a large well-ordered school feels when he points to the group of children and says to a visitor, "These are *my* scholars," so we feel as we think of the great throng of children—boys and girls of all ages—who belong to *our* great "*Agriculturist* Family"—to *our* school. What a company! For aught we know, they are all good boys and girls—we can't think of them otherwise. Perhaps you would each feel gratified to know something of the *size* of this company to which you belong. Everybody likes to be in a large school, or on board the biggest ship where there are the most passengers. It's something to think of, as well as tell of, when one has been a participant in a grand excursion, or a great celebration. One really attaches more value to himself, and makes more effort to act worthy of his position. Well, young friends, you belong to *our* great family; you will this year look upon the same beautiful pictures (like the one above); you will all read the same pages, you will all have similar thoughts, and in many respects, you will all belong to *one* company. But how *many* are there of you who thus belong to our group? Judging from the number of households to which our paper is a constant visitor, and the average number in a house old enough to read, we suppose that far more than *Two Hundred Thousand Boys and Girls* belong to the Agriculturist Family. You, dear reader, help make up this grand company. Please consider yourself introduced to the whole, and as being one of the group....And what a group! Let's suppose only 200,000 all together, and give each one two feet square to stand in. *Hurrah!* A *twenty-acre field full*, with scarcely any room outside for our friends....Some curious thoughts are suggested as we, in imagination, look upon the grand gathering. Among all of you, there are no two just alike. Every mother could pick out her own children the moment she saw them; she would make no mistake. How is it that there is such a marked difference, when all have faces (cheeks, foreheads, chins, mouths, noses and eyes) so much alike in form and general appearance? Can you account for it? ....There are before us a hundred thousand bonnets and hoods, as many more hats and caps, as many coats or jackets, and as many girls' dresses. There are a hundred thousand pairs of boys' boots or shoes, and as many of girls shoes, and so on of other items of dress. How many stitches have been taken by the mothers of our group to make up all the dresses, and aprons, and skirts, the coats, pants, and the other garments? Can any of our girls tell how many stitches they each wear out in a year? Can any of the boys? Do you ever think who makes or pays for these stitches?....Let us look at our whole group of young readers again. They would fill two hundred good-sized churches. They would make *two thousand* Sunday schools of one hundred scholars each. If, this year, they should each learn seven verses in the Bible every week, the whole number learned would be equivalent to *seventy-two million and eight hundred thousand* verses (72,800,000)....Suppose each should make his or her parents or some one else happy once a day, how many times would there be happiness given this year?—*Answer:* Seventy-three million times!....If each of you should only once a day get vexed at something, and *fret* about it, how many "frets" would there be, just among our usually pleasant Agriculturist Family, during this present year? Oh! oh! *Seventy-three million frets!* Suppose all try and spend at least one week (say *this* week,) without fretting, or scolding, or getting vexed at all. That will blot out *fourteen hundred thousand* exhibitions of temper that do nobody else any good, but always make the fretter think less of himself or herself. Come, let's have a trial of patience for one week, beginning this hour. Please keep these black figures (**1,100,000**) before the eye, or in the mind, and each one do your part in lessening the number for *this* week. If you like the result of the experiment, perhaps you may try it of your own accord the second week...."*Pleasant words are as a honey-comb, sweet to the soul, and health to the bones.*"—So said the wise man. Not only are pleasant words "sweet to the soul" of others, but they make one's *own* soul happy. Suppose each of our two hundred thousand boys and girls use pleasant words to others—to their parents, to their brothers, or sisters, or playmates—say once a week, where they have been accustomed to use cross, or fretful, or peevish ones; they will give (and receive) "honey-comb," and "sweetness to the soul," more than a million times, this year. Dear reader, will *you* do *your* part? Will *you* try? ..."School's dismissed." The grand company will now break up, and all hasten to their homes scattered here and there all over our vast country, from Nova Scotia to California....Here's a copy of the *February Agriculturist* to take along, to be read at each fireside. We hope you will find in it something to both please and interest you. But don't forget your part of what is to be done by the twenty-acre group you have been among to-day.

Lessons worth Learning—A Proposal.

Probably most of our young readers attend some Sunday School, and learn portions of the New Testament each week. (We hope and trust that none feel themselves "too old" to go). But whether you live near enough to attend any School or not, it will be a very good exercise to thoroughly learn a few verses each week. Aside from any other benefit, the exercise will strengthen the memory, and on this account alone is very valuable. Below is a series of 52 lessons prepared at our suggestion by Dr. James Strong, S. T. D., (author of Harmony of the Gospels, etc.,) which embrace *in chronological order*, some of the leading events, parables, etc., from the Birth of Christ to the Imprisonment of Paul at Rome—a period of about 61 years. These lessons average about 7½ verses each, or 393 verses in all, and they would read well if placed together. Any one learning these in youth will have them stored in the mind indelibly. They are being adopted in many families and schools; we have circulated some thousands of copies printed in neat tabular form, and we have a large number of scholars in our own school who will learn the whole, this year. We invite all the young readers of the *Agriculturist* to join in the exercise. We can not offer premiums to all who will do so, but we will make this proposal: One year from now, (Feb. 1863,) we will print, either in the *Agriculturist*, or in a Supplement, A ROLL OF HONOR, containing the name of every one of our readers who will this year learn all the lessons in this table, and previous to Jan. 1st, 1863 send us a certificate that it is done, from the teacher, parent, or other person, who shall hear the whole recited together in December next:

TABLE OF LESSONS FOR A YEAR.

	1863.	*Subject.*	*Chapter.*	*Verses.*
1.	Jan.	1 Angels at Bethlehem	Luke ii,	8 to 14
2.	"	12 Visit of the Magians	Matt. ii,	1 to 9
3.	"	19 Christ at twelve Years of Age	Luke ii,	42 to 49
4.	"	26 The Baptist's Mission	Mark i,	4 to 11
5.	Feb.	2 Christ's Temptation	Matt. iv,	3 to 10
6.	"	9 Interview with Nicodemus	John iii,	1 to 8
7.	"	16 Christ equal with the Father	John v,	18 to 24
8.	"	23 Doctrine of the Sabbath	Mark ii,	23 to 28
9.	Mar.	2 Parable of the Sower	Matt. xiii,	3 to 9
10.	"	9 Calling of the Twelve	Mark vi,	7 to 13
11.	"	16 John's Imprisonment	Mark vi,	21 to 29
12.	"	23 Christ the Bread of Life	John vi,	26 to 33
13.	"	30 Transfiguration	Matt. xvii,	1 to 8
14.	April	6 Necessity of Child-like temper	Matt. xviii,	1 to 7
15.	"	13 Appointment of the Seventy	Luke x,	1 to 11
16.	"	20 Parable of the Good Samaritan	Luke x,	30 to 37
17.	"	27 The Lord's Prayer	Luke xi,	1 to 8
18.	May	4 Christ the Good Shepherd	John x,	1 to 7
19.	"	11 Parable of the Prodigal Son	Luke xv,	11 to 19
20.	"	18 The Lord's Supper	1 Cor. xi,	23 to 29
21.	"	25 Christ journeying to Gethsemane	Luke xxii,	39 to 46
22.	June	1 Seizure of Christ	Luke xxii,	47 to 53
23.	"	8 Peter's Denial	Luke xxii,	54 to 62
24.	"	15 Christ before the Sanhedrim	Luke xxii,	63 to 71
25.	"	22 Christ before Pilate	Luke xxiii,	1 to 7
26.	"	29 Christ before Herod	Luke xxiii,	8 to 16
27.	July	6 Christ Sentenced by Pilate	Luke xxiii,	18 to 25
28.	"	13 The Crucifixion	Luke xxiii,	32 to 38
29.	"	20 Death of Christ	Luke xxiii,	44 to 53
30.	"	27 The Sepulchre guarded	Matt. xxvii,	62 to 66
31.	Aug.	3 Resurrection of Christ	Mark xvi,	1 to 8
32.	"	10 Christ's Appearances	Mark xvi,	9 to 16
33.	"	17 The Ascension	Acts i,	6 to 12
34.	"	24 Gift of the Holy Spirit	Acts ii,	1 to 7
35.	"	31 Peter & John before Sanhedrim	Acts iv,	5 to 12
36.	Sept.	7 Community of Goods	Acts iv,	32 to 37
37.	"	14 Martyrdom of Stephen	Acts vii,	54 to 60
38.	"	21 Conversion of Paul	Acts ix,	1 to 9
39.	"	28 Conversion of Cornelius	Acts xi,	11 to 17
40.	Oct.	5 Founding of Church at Antioch	Acts xi,	19 to 26
41.	"	12 Peter delivered from Prison	Acts xii,	1 to 7
42.	"	19 Paul appointed Missionary	Acts xiii,	24 to 31
43.	"	26 Decree of Council of Jerusalem	Acts xv,	22 to 29
44.	Nov.	2 Philippi, Jailer Converted	Acts xvi,	25 to 34
45.	"	9 Paul's Preaching at Athens	Acts xvii,	22 to 28
46.	"	16 Tumult at Ephesus	Acts xix,	21 to 27
47.	"	23 Arrest of Paul at Jerusalem	Acts xxi,	27 to 35
48.	"	30 Paul begins Voyage to Rome	Acts xxvii,	1 to 8
49.	Dec.	7 Storm during Paul's Passage	Acts xxvii,	18 to 26
50.	"	14 Paul Encourages Mariners	Acts xxvii,	27 to 34
51.	"	21 Escape from the Wreck	Acts xxvii,	39 to 44
52.	"	28 Paul's Arrival at Rome	Acts xxviii,	11 to 16

N. B. Between the last column divide the verse beginning and the verse ending the lesson—both are included.

We ought to have printed this in the *January Agriculturist*, but it was not completed when that number went to press. A little extra effort will bring up the four lessons for January. While learning these lessons, it would be well to read the intervening portions of sacred history.

NOTE TO EDITORS AND SUPERINTENDENTS.—The above can be published by any editor desiring to do so—it was copyrighted merely to stop its use for speculative purposes. Superintendents can obtain neat printed copies of the above size, or those 7x9 inches, at cost of printing—say 25 cts. to $1 per 100, according to whether printed on thin or thick paper, or on cards. We have furnished a copy to every teacher and scholar in our own school.

An Interesting Coin.

Our old correspondent, "Whistler at the Plow," sends for the *Agriculturist* boys and girls, a picture of a copper coin he recently found in his field not far from New Brunswick, N. J. We find one like it in this City, at the store of a Nu-mis-mat-ist (that is a dealer in old coins and medals). He values it at a good many dollars on account of its scarcity. It is, we believe, one of the first copper coins made in this country after the declaration of Independence, in 1776. We give an engraving showing the exact size, and the embossing or raised lines and characters on the two sides. On one side are 13 bars or stripes, representing the thirteen colonies, or States, which united in the Declaration of Independence of Great Britain. On the other side, the letters USA. stand for United States of America. They are so closely united or blended as to form but one character, thus representing the *Union*. The character somewhat resembles the dollar mark, ($,) and some have given this coin as the origin of that mark. We think, however, that the $ mark had another and earlier origin.

No Boy Wholly Bad.

"I can't be good, and I won't try."—So said a boy in our hearing, the other day. He is an active, bright boy, full of fun, and nearly but not quite, half full of mischief. He is kind hearted, loves approbation, and from the bottom of his heart would like to deserve to be called a *good* boy. He is sensitive to the opinions of others, and when for the fun of the thing, or carelessly, he has committed an error and been reproved for it, his mind dwells upon the reproof so much that he has come to think that about all he does worthy of notice is bad.—A great mistake this and likely to lead to bad consequences. No one is in a more hopeless condition than he who has lost confidence in himself. Now we happen to know something of the heart of that boy. We have studied his character for months, and though he has the reputation of being a bad boy, we know he has many more good traits than bad ones, and that, if he only thought so himself, he has the ability to be one of the smartest and best boys we are acquainted with. We hope he will see this item in the *Agriculturist*, and suspect it is in part intended for him.——Perhaps, reader, you may be in a similar state of mind. Your parents and teachers may be so constantly oppressed with labor and care that they may not have the time, or discretion, to do more than tell you of your wrong deeds. But don't get discouraged. We have known and cared for many hundreds of boys and girls, in the Sabbath school, and elsewhere, and some of them were called bad by almost every body, but we never yet knew one who had not many more good traits than bad ones. It is so with you my lad, we know it is. Remember this, and think more of your good feelings and impulses, and then you will cherish these, and they will increase and grow. Pray don't fall into, or remain in that fatal error of thinking that you are *all* bad, and that therefore there is no use of your trying to be good. As your friend we tell you *it is not so!*

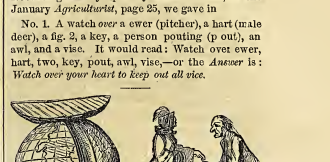
Have the Boys a Tool Chest?

Perhaps we have not said enough to encourage the boys to try to secure one of the premium Tool Chests, (See Premiums Nos. 24, 25, 26). They are really fine, and worth working for. A good many boys can yet make up a club of 28 to 43 Subscribers and they will then have a fine assortment of tools of various kinds, all arranged in a neat chest, each one in its place. They are made by Geo. Parr of Buffalo who has no little reputation as a skillful provider of tools for boys and men too. Quite a number of boys, and some men also, have already secured premium tool chests this year. Mr. Parr will get up as many more as we may need.

Rebuses.

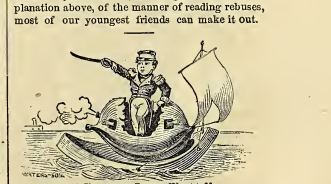
Rebuses, Puzzles, Enigmas, etc., all mean nearly the same thing—something that taxes the ingenuity to find it out. A *rebus* is generally applied to a picture puzzle, where a word or sentiment is expressed by one or more pictures. Thus, a lover painted for his sweetheart: a rose, a hill, an eye, a loaf, and a well, meaning, "Rosc Hill, I love well." Rebuses generally spell by sound. Thus, in the January *Agriculturist*, page 25, we gave in

No. 1. A watch *over* a cwer (pitcher), a hart (male deer), a fig. 2, a key, a person pouting (p out), an awl, and a vise. It would read: Watch over ewer, hart, two, key, pout, awl, vise,—or the *Answer* is: *Watch over your heart to keep out all vice.*



No. 2. This picture richly read by sound, gives one of the most beautiful passages in the Bible. Try and find it out. After trying your utmost, if then unable to read it, you can turn to Luke ii, 14. But don't be in a hurry to find the explanation.

No. 3. This picture expresses a sentiment famous in the political history of our country. We will leave you to read it, believing that after the explanation above, of the manner of reading rebuses, most of our youngest friends can make it out.



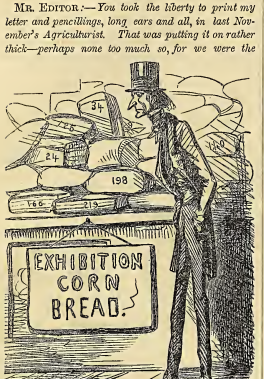
"Commodore Nutt."

Some of our *boys* doubtless feel it quite an affliction to be small, and are anxious for the time to come when they will be grown up men. We had a pleasant visit with a man the other day who will no doubt find it quite advantageous to be so *small*. Why, he is not taller than our three year old Charlie and not near so heavy. Though over 18 years old we picked him up in one hand very easily; he weighs less than half a bushel of corn. We forgot to measure him, but he will have to look *up* to see the face of Tom Thumb, certainly. Mr. Barnum has got hold of him, and he will doubtless soon be famous. He is the son of Major Nutt of Manchester, N. H., and as Barnum has had a general (Tom Thumb), he names his new protege "*Commodore*"—Commodore Nutt—perhaps also in compliment to the Navy, which appears to be reaping all the honors in the war. We commissioned our humorous artist to show up the Commodore *appropriately* in the *Agriculturist*, ahead of all others if possible.

From a Humorous Correspondent.

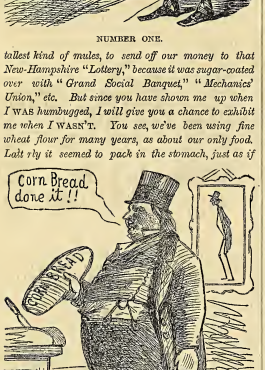
More About the Corn Bread Exhibition.

MR. EDITOR:—*You took the liberty to print my letter and pencillings, long ears and all, in last November's Agriculturist. That was putting it on rather thick—perhaps none too much so, for we were the*



NUMBER ONE.

tallest kind of mules, to send off our money to that New-Hampshire "Lottery," because it was sugar-coated over with "Grand Social Banquet," "Mechanics' Union," etc. But since you have shown me up when I WAS *humbugged, I will give you a chance to exhibit me when I* WASN'T. *You see, we've been using fine wheat flour for many years, as about our only food. Lait ry it seemed to pack in the stomach, just as if*



NUMBER TWO.

you should wet up a piece of bread, and make it into a mass of dough. When it got into the stomach, the gastric juice couldn't dissolve the lump readily; and when it did, there were no coarse particles to stimulate the digestive apparatus to action, such as Nature supplies when she makes a kernel of wheat with bran on it. The consequence was, we had the dys-pepsia very badly, wife and I had—particularly me. I frequently had to take medicine as an internal stimulant, in place of coarse particles of food. The result was, I became so thin that I often heard the boys whisper: "There goes Smith's shadow." You can see how I looked, by the sketch NUMBER ONE, *sent herewith. Well, wife and I happened down to York in December. (The fact was, our oldest daughter, who is married out West, had sent some of her best corn bread to the Exhibition, and expected the premium, and so we purposely happened there just at the right time to look after her honors.) We didn't find just what we expected: we found a great deal more, I tell you; and I wanted to come right to your desk, Mr. Editor, and tell you how surprised I was; but wife wouldn't let me—she said that if I made myself known, you would be looking after my ears, and so I kept shy of you. But, to cut my story short, wife got so interested in corn bread that she brought home lots of recipes, and has been making corn bread and corn cake for every meal since. That's only a month, and what the effect is you can see by my present portrait,* NUMBER TWO, *also sent herewith. All this comes from eating bread that don't pack in one's stomach. Perhaps a little is due to the oil or fat in the corn.*

Yours, etc.

Barnstable Co., Mass., Jan. 18, 1862.

New-York Live Stock Trade for 1861.

Accounts are kept at the Office of the *Agriculturist*, of all the receipts at the regular yards of live animals destined for slaughter, milch cows, etc. These accounts are gathered at the yards themselves, and not from newspaper reports. Our Monthly Reviews are made up from these, and we also furnish the reports of each market to some of our leading Daily and Weekly journals. The following record from our books will be interesting, and useful for future reference. If extra for each week in the year, the receipts of the different kinds of animals, and the weekly average price of all beef cattle sold. The price is in cents per pound for the estimated weight of the dressed carcasses:

WEEKLY RECEIPTS FOR 1861.

1861. Week Ending	Total Cattle.	Net Average price in cts.	Milch Cows.	Veal Calves.	Sheep & Lambs.	Live Hogs.	Total No. of kinds.
Jan. 7	3,273	8½	111	326	6,763	10,231	21,491
Jan. 14	4,208	8½	77	305	5,964	19,959	29,933
Jan. 15	2,977	8½	101	339	6,711	11,323	25,451
Jan. 22	4,091	7½	81	261	5,548	8,215	18,596
Jan. 29	3,893	7½	80	315	7,374	9,596	21,258
Feb. 5	4,007	7½	113	279	7,425	9,073	20,897
Feb. 12	3,665	7½	83	261	8,487	5,282	17,808
Feb. 19	3,633	8	109	460	8,138	7,074	19,413
Feb. 26	3,233	8½	84	232	5,670	4,710	14,019
Mar. 5	3,633	8½	93	432	5,893	6,634	16,648
Mar. 12	3,304	8½	119	422	6,267	8,706	18,818
Mar. 19	4,549	8½	103	686	6,703	4,339	16,537
Mar. 26	4,729	7½	101	573	4,318	6,825	17,321
April 2	5,745	7½	147	880	7,351	8,902	20,630
April 9	4,972	7½	108	632	4,763	9,134	19,579
April 16	4,318	7½	121	651	5,176	6,062	16,328
April 23	5,325	7½	73	1,153	8,848	6,615	20,209
April 30	3,923	8½	81	937	6,054	8,693	19,841
May 7	4,557	8½	77	797	6,961	10,102	21,634
May 14	4,336	8½	128	1,187	4,489	8,838	19,003
May 21	4,796	8½	109	1,301	6,961	5,156	18,523
May 28	3,519	8½	121	940	9,003	4,769	18,371
June 4	4,659	8½	127	825	6,648	6,256	18,515
June 11	3,868	8½	109	1,067	10,971	5,466	21,321
June 18	3,702	8½	122	1,111	9,094	4,576	19,004
June 25	4,845	8	110	873	10,315	6,351	22,239
July 2	4,450	8	98	1,414	13,450	6,403	25,993
July 9	4,250	7½	111	765	11,162	4,368	20,556
July 16	3,744	7½	126	1,344	12,323	4,409	21,946
July 23	3,536	8	87	600	11,095	2,508	17,616
July 30	3,623	8	104	615	11,123	6,491	22,344
Aug. 6	3,267	7½	123	594	15,907	5,350	25,346
Aug. 13	4,418	7½	145	570	12,997	5,026	23,156
Aug. 20	4,668	7½	174	656	13,203	4,623	23,419
Aug. 27	3,226	7½	124	418	12,153	5,204	21,122
Sept. 3	4,530	8	128	496	14,339	4,944	24,436
Sept. 10	3,821	7½	83	474	13,250	5,078	26,714
Sept. 17	3,493	7½	91	545	13,434	4,670	24,233
Sept. 24	3,192	7½	105	539	14,390	9,201	28,415
Oct. 1	4,774	7½	109	923	16,643	5,270	27,719
Oct. 8	5,002	7	132	403	12,984	8,344	28,425
Oct. 15	5,129	7	107	1,013	12,917	7,337	26,961
Oct. 22	3,477	7½	130	653	11,412	9,228	26,640
Oct. 29	6,134	6	102	484	18,196	18,809	41,655
Nov. 5	5,855	7½	100	548	10,799	13,380	28,682
Nov. 12	5,401	7½	104	524	14,272	26,206	45,629
Nov. 19	4,103	7½	121	703	14,679	27,773	47,383
Nov. 26	4,686	7	100	606	14,147	34,090	49,629
Dec. 3	4,961	7½	85	490	16,199	33,393	55,067
Dec. 10	4,295	7½	109	534	8,809	36,759	50,521
Dec. 17	3,886	7½	101	581	8,475	40,055	52,698
Dec. 24	3,335	8½	72	176	8,063	17,501	29,047
Dec. 31	4,569	8½	96	291	8,753	40,483	54,192
Total	230,512	....	5,816	33,333	527,376	585,599	1,387,577
Average	4,270	7 4-5	110	630	9,950	11,262	26,182

TOTAL RECEIPTS OF LIVE ANIMALS FOR 2 YEARS.

	Beeves.	Cows.	Calves.	Sheep.	Swine.	All kinds.
1861	236,512	5,816	33,333	527,376	585,599	1,387,577
1860	226,747	7,154	46,163	514,191	310,628	1,107,883

AVERAGE WEEKLY RECEIPTS FOR 2 YEARS.

	Beeves.	Prices.	Cows.	Veals.	Sheep.	Swine.	All kinds.
1861	4,270	7 4-5	110	630	9,950	11,262	26,182
1860	4,360	8 1-5	138	772	9,888	6,147	21,305

Notes.—The second and last days of 1861 were general market days; the total receipts are really for 53 weeks. The number of beef cattle for the two years was very nearly the same, but the average business for 53 weeks in 1860, is a little higher. The net price of beef averaged 2-10ths of a cent, or 4 mills per lb. lower in 1861 than in 1860. Fewer cows were required last year, as the better pasturage secured more milk from the cows kept. The number of live hogs nearly doubled, owing to the disturbed condition of the hog-slaughtering towns along the Ohio and Mississippi rivers, and the blockade of the Mississippi, which stopped the usual shipping of pork down that channel. It will be seen by the table that for the closing weeks of the year, 18,000 to 40,000 live hogs were brought to New-York, against a weekly average of 6,147 for all of 1860. The receipts of hogs have been even larger since Jan. 1.

DERIVATION OF BEEF CATTLE.

We have gathered, weekly, the sources of the cattle brought to the Forty-fourth-street Yards, at which place were sold 192,575 of the 226,512 beef cattle brought to this City in 1861. These 192,375 came direct to the market from the following States:

Illinois	80,459	Canada	1,063
Ohio	36,554	Pennsylvania	1,053
New-York	29,052	Connecticut	805
Iowa	11,205	New-Jersey	508
Kentucky	8,189	Wisconsin	120
Michigan	4,588	Chectaw Nation	100
Missouri	3,736	Massachusetts	67
Virginia	1,417	Texas	50

N. B.—These are the points from which the cattle last came. Many cattle were brought Eastward and pastured for a season before coming to market, and were credited to the last pasture ground. This was largely the case with those set down for New-York State. From this fact, and from other sources of information, we estimate that the *great pasturing and corn-growing State of Illinois furnished more than half of all the immense supplies of beef cattle brought to New-York City during* 1861.

Figures in a Meat Bill—Interesting Items.

We give in another article a summary of the live animals brought to New-York City during 1861. These figures, with some account of the cost, etc., as prepared originally in the office of the *Agriculturist*, are being published throughout the country, generally without any credit as to their origin. We will bring together here a few items of interest. First as to the mode of selling.

BEEF CATTLE, are sold by the 'head, at a price based upon the weight of the dressed carcass. This weight averages not far from 55 lbs. for each 100 lbs. of live weight; fine fat cattle sometimes dress 60 to 65 lbs., and poorer grades run below 50 lbs. The average net price of all cattle sold in 1861 was about 7 cents and 8 mills per lb., the sales ranging from 4c. to 11c. per lb., for different grades, and at different seasons.

HOW OTHER ANIMALS ARE SOLD.—*Milch Cows*, are sold by the head, with or without the calf.—*Veal Calves*, are sold by the pound live weight.—*Sheep and Lambs* are sold at so much a head for a lot, or the pick of a lot, but the price is reported at the price per lb. live weight.—*Live Hogs*, are sold by the pound, live weight.

AVERAGE WEIGHTS AND PRICES.—*Beef Cattle:* The average net weight (dressed carcass) of all the live beef cattle sold last year was about 730 lbs. each. Average price 7 cents 8 mills per lb, or $58.40. Add to this for the offal, as below, $11.61, and we have the average price of all the cattle, large and small = $68.51.

Milch Cows: Average price for 1861 about $32.

Veal Calves: Shrinkage in killing and dressing, about 35 lbs. in the 100 lbs. Average live weight about 120 lbs., average price about 4½c. per lb.; average per head=$5.10.

Sheep and Lambs: Shrinkage in killing about 40 lbs. in 100 lbs. Average live weight of sheep about 95 lbs., and of lambs about 70 lbs.; average of all of both kinds 85 lbs., average price, 4½c.; average price per head=$3.82½.

Live Hogs: Shrinkage in killing about 22 lbs. in 100 lbs. Average live weight, 170 lbs., average price per lb. 4½c., average per head=$7.65.

BEEVES' OFFAL.—This includes Skin, Rough Tallow, Head, Tongue, Feet, Heart, Liver, Tripe, Intestines, and Manure, or strippings. All these articles are turned to account by the butcher, and are not reckoned in the carcass value, which we have put at 730 lbs., and 7 cents 8 mills per lb. The offal for last year averaged about as follows: *Skin*, average 87 lbs., average price about 5½c.=$4.78½. (The price varied during the year from 3½c. to 9c. per lb.—*Rough Tallow*, average 75 lbs., average price 7c.=$5.25.—*Heads* sold for about 25 cents each. —*Tongues* varied from 30c. to 56c. each, average say 35c. *Feet* averaged about 28c., varying from 25c. to 30c.—*Hearts* averaged about 6 lbs, and sold for only about 10 cents each.—*Livers* weigh about 10 lbs., and sold for an average of 30 cents each.—*Tripe* is nearly all used here, and is sold at an average of about 15 cents per animal.—The *Intestines* are generally stripped and used for Bologna sausages, etc., at 5 cents per animal. The *Manure*, or strippings of the tripe (stomach), and intestines, is also

sold at about 5 cents per animal. The intestines and manure are perquisites of the butcher boys. but as these are part of their pay, they should be reckoned into the value of the animal. The *total* value of the offal last year, therefore, averaged per animal, $11.61.

GENERAL SUMMARY FOR 1861.

226,312 Beef Cattle at $68.55 each	$15,513,687.60
598,509 Live Hogs at $7.65 each	4,578,593.86
527,358 Sheep and Lambs at $3.82½ each	2,037,144.35
33.388 Veal Calves at $5.10 each	170,279.80
5,816 Milch Cows at $32.00 each	186,112.00
Total (including cows)	$22,485,187.61
Total fresh Meat Bill for 1861	**$22,299,075.61**

Over Twenty-two Million Dollars for the wholesale value of live Beeves, Hogs, Sheep, and Veals, at the time of delivering from the yards. The profits while passing from the sales yards to consumers, are not taken into account. Nor does the above include all the *fresh* meat brought here. Butchers buy many animals direct from farmers, and large numbers of all kinds are brought in ready dressed, having been slaughtered elsewhere.

POUNDS OF MEAT IN THE ABOVE.

226,312 Beeves, at 730 lbs.,	dressed weight	165,208,760 lbs
598,509 Hogs, at 132 lbs.	do.	79,003,188 lbs.
527,358 Sheep, at 51 lbs.	do.	26,895,258 lbs.
33,388 Veals, at 78 lbs.	do.	2,604,264 lbs.
Total pounds of meat slaughtered		**273,711,470**

Two Hundred and Seventy-three Million Pounds of Fresh Meat in a Single Year, for this Single City of Gotham!—But these are only the animals brought in alive, and slaughtered here. It does not include the large number of animals bought by butchers daily of farmers, nor those sold from barges at the wharves, nor the immense number of dressed carcasses brought in, to say nothing of salted meats, of poultry, of game, of fish, of oysters, etc. It will be understood, however, that not all this meat is actually consumed by the million people on Manhattan Island. The neighboring cities and country, the army, and the ships, obtain much of their animal food from this City. But with these drawbacks, the slaughter going on here is wonderful—**1,387,616** animals killed here in a single year! At ten hours a day, this implies the killing of **4,448** for each working day, **445** each hour, and *more than seven for every minute!*

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Monday Morning, Jan. 20, 1862.

*** The materials for this review are furnished specially for the *Agriculturist* by a reliable man of long experience, who, throughout the year, spends the whole of each business day in the markets, watching the transactions and collecting information, and we flatter ourselves that this report is one of the most correct anywhere published.

CURRENT WHOLESALE PRICES.

	Dec. 20.	Jan. 20.
FLOUR—Super to Extra State	$5 40 @ 5 85	$5 45 @ 5 90
Superfine Western	5 35 @ 5 50	5 40 @ 5 55
Extra Western	5 60 @ 7 00	5 70 @ 7 00
Fancy to Extra Genesee	5 90 @ 7 00	5 95 @ 7 00
Super. to Extra Southern	5 70 @ 8 50	5 80 @ 8 25
RYE FLOUR—Fine and Super.	3 10 @ 4 50	3 00 @ 4 30
CORN MEAL.	3 10 @ 3 50	2 90 @ 3 30
WHEAT—Canada White	1 45 @ 1 50	1 45 @ 1 50
Western White	1 44 @ 1 51	1 44 @ 1 52½
All kinds of Red	1 24 @ 1 43	1 26 @ 1 45
CORN—Yellow.	67 @ 68	66 @ 67
White	@ 70	68 @
Mixed	66 @ 67	65 @ 66
OATS—Western	42½@ 43½	41 @ 42
State	43 @ 44	42 @ 43
RYE	82 @ 85	81 @ 84
BARLEY	65 @ 80	72 @ 80
HAY, in bales, per 100 lbs.	70 @ 85	85 @ 1 00
COTTON—Middlings, per lb.	38 @ 40	32 @ 34
RICE, per 100 lbs.	6 50 @ 7 50	6 75 @ 7 75
HOPS. crop of 1861, per lb.	16 @ 23	17 @ 24
FEATHERS, Live Geese, p. lb.	32 @ 38	30 @ 36
SEED—Clover, per lb.	7½@ 7¾	7 @ 7¾
Timothy, per bushel	1 87½@ 2 25	2 00 @ 2 12½
SUGAR—Brown, per lb.	7¼@ 9½	7 @ 9¼
MOLASSES, New-Orleans, p.gl.	50 @ 55	50 @ 50
COFFEE. Rio, per lb.	17 @ 19	17½@ 20
TOBACCO—Kentucky, &c, p.lb.	9 @ 17	9 @ 17
Seed Leaf, per lb.	5 @ 20	6 @ 21
WOOL—Domestic fleece, p. lb.	43 @ 53	44 @ 54
Domestic, pulled, per lb.	36 @ 50	38 @ 50
TALLOW, per lb.	9½@ 9⅝	9¼@ 9½
OIL CAKE, per tun	34 00 @40 00	32 00 @37 50
PORK—Mess, per bbl.	12 50 @12 75	11 75 @12 37½
Prime, per bbl.	8 50 @ 8 87½	8 00 @ 9 50
BEEF—Repacked mess	11 50 @12 00	11 00 @12 00
LARD, in bbls., per lb	8 @ 9⅛	7½@ 8½
BUTTER—Western, per lb.	11 @ 16	11 @ 15
State, per lb.	16 @ 22	15 @ 21
CHEESE	6 @ 8	5½@ 7¼
EGGS—Fresh, per dozen	19 @ 20	16 @ 17
Limed, per doz	15 @ 16	14 @ 16
POULTRY—Fowls, per lb.	6 @ 9	5 @ 9
Geese, per lb.	6 @ 8	6 @ 7
Ducks, per lb.	8 @ 10	8 @ 12
Turkeys, per lb.	8 @ 11	6 @ 9
Partridges, per pair	30 @ 62	25 @ 50
VENISON, Carcass—per lb.	6 @ 10	6 @ 7
Dried Apples, per lb.	5½@ 7½	6½@ 7
Dried Peaches per lb., peeled	18 @ 20	18 @ 20
Dried Raspberries, per lb.	15 @ 16	13 @ 14
POTATOES—Mercers, p. bbl.	2 00 @ 2 25	2 00 @ 2 25
Peachblows, per bbl	1 50 @ 1 75	1 75 @ 1 88
Western Reds, etc.—per bbl.	1 25 @ 1 38	1 38 @ 1 50
Nova Scotias—per bush.	42 @ 47	50 @ 55
Sweet Delaware, per bbl.	3 00 @ 3 50	3 50 @ 3 75
ONIONS—Red, per bbl	1 00 @ 1 25	1 00 @ 1 12
White, per bbl.	1 25 @ 1 75	1 25 @ 2 00
TURNIPS—Rutabaga, per bbl.	75 @ 1 00	75 @ 1 00
SQUASH—Marrow, per bbl	75 @ 1 00	1 50 @
APPLES—Common, per bbl.	2 00 @ 2 50	2 50 @ 3 00
Apples—good, per bbl	3 00 @ 4 00	3 50 @ 4 50
Cranberries, per bbl		8 00 @11 00

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
26 days *this* month	272,000	61,500	45,200	22,550	63,000	128,150
25 days *last* month	705,000	3,159,500	2,361,000	203,975	260,000	1,469,000

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
26 days *this* month,	392,100	1,116,000	1,205,450	145,400	138,700
25 days *last* month	778,000	5,641,000	3,229,000	204,000	276,000

2. COMPARISON WITH SAME TIME LAST YEAR.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 days *this* year	272,000	61,500	45,200	22,550	63,000	128,150
25 days *last* year	110,000	81,800	61,900	20,500	41,500	97,200

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley*
25 days *this* year	392,100	1,116,000	1,205,450	145,400	138,700
25 days *last* year	341,200	1,631,500	1,552,000	17.000	58,500

3. *Receipts in New-York during each of three years past.*

	Flour. Bbls.	*Wheat. Bush.*	*Corn. Bush.*	*Rye. Bush.*	*Barley. Bush.*	*Oats. Bush.*
1861	4,968,971	28,429,135	21,120,242	775,665	1,854,304	4,852,009
1860	3,531,420	17,072,796	14,709,562	206,008	1,251,007	4,685,656
1859	3,191,822	3,818,092	3,068,622	334,491	1,527,400	4,226,920

4. *Exports from New-York for each of three years past.*

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1861	3,110,346	28,898,314	12,889,850	1,000,405	3,927	160,825
1860	1,926,202	13,538,039	4,085,082	450	8,280	103,076
1859	938,516	297,587	497,886	——	6,550	2,568

5. *Stock of Flour in New-York City, Jan. 1.*

	1860.	**1861.**	**1862.**
Western Canal Flour, bbls.	681,876	569,800	447,056
Canadian Flour, bbls	17,150	10,200	11,100
Southern Flour, bbls	228,503	91,998	36,956
Total	927,529	671,998	495,112

Stock of Grain in New-York, Jan. 1.

	1859.	**1860.**	**1861.**	**1862.**
Wheat, bush	1,211,312	1,915,388	3,535,741	2,046,052
Corn, bush	669,690	79,400	2,712,000	5,573,911
Rye, bush	43,500	30,500	26,400	58,500
Barley, bush	806,416	868,795	169,574	435,472
Oats, bush	860,200	1,576,100	494,790	764,575

6. *Exports from New-York, from Jan, 1 to Jan. 15.*

	Flour, bbls.	*Wheat, bush.*	*Corn.*	*Rye.*	*Oats.*
1862	156,555	842,096	522,334	67,286	1,002
1861	71,785	563,937	405.665	1,210	2,226

7. *Receipts at Chicago during each of last four years.*

	1861.	**1860.**	**1859.**	**1858.**
Flour, bbls.	1,583,087	700,006	742,012	524,955
Wheat, bush.	18,147,181	14,568,429	8,184,746	9,763,326
Corn, bush.	26,668,530	15,487,966	4,410,009	8,250,033
Oats, bush.	1,448,444	2,029,906	1,813,048	2,295,322
Rye, bush.	533,860	295,436	228,179	70,031
Barley, bush.	461,647	623,005	662,137	411,421

8. *Stock of Breadstuffs at Chicago, Jan. 1, 1862.*

Flour, bbls	26,986	Oats, bush	239,205
Wheat, bush	1,855,903	Rye, bush	95,022
Corn, bush	1,568,536	Barley, bush	62,399

9. *Receipts at Albany (by Erie and Champlain Canals,) during each of three years past.*

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1861	1,493,238	29,886,637	23,342,334	832,792	2,235,850	6,978,338
1860	1,149,100	11,176,000	14,155,500	332,100	2,967,600	6,490,900
1859	903,311	5,110,554	2,492,217	401,994	3,305,277	6,739,756

10. *Exports of Breadstuffs from Philadelphia, during each of the last six years.*

	Flour, bbls.	C. Meal, bbls.	Wheat, bush.	Corn, bush.
Total, 1861	362,652	31,672	2,054,988	303,235
Total, 1860	295,137	49,357	811.981	390,369
Total, 1859	172,944	44,454	54,434	50,115
Total, 1858	219,871	39,773	88,199	468,181
Total, 1857	198,867	48,572	190,400	625,526
Total, 1856	342,035	92,603	684,092	1,657,233

11. *Receipts of Breadstuffs at Boston for December 1861, and total receipts for two years.*

	In Dec. 1861.	Total, 1861.	Total, 1860.
Flour, bbls	240,196	1,429,697	1,160,774
Flour, half-bbls.	859	8,603	7,917
Corn, bushels	45,676	1,979,925	2,045,900
Corn, sacks	——	1,191	20,940
Wheat, bushels	15,650	29,388	30,135
Oats, bushels	177,950	1,047,345	1,467,611
Rye, bushels	2,100	33,156	33,156
Shorts, bushels	43.700	515,833	551,795
Rye Flour, bbls	——	865	1,204
Corn Meal, bbls	——	13,611	3,963

The preceding eleven tables, illustrative of the great movements in Breadstuffs during the year 1861, possess unusual interest for the readers of the *Agriculturist.* Having been compiled with much care and derived from authentic sources, they are perfectly reliable. We have so often and minutely referred to the heavy operations of the past year, that it is unnecessary to do more now than call particular attention to the figures here presented.

The old year closed gloomily enough, but happily the new opens with brighter prospects. Our relations with European powers, generally, and Great Britain, particularly, are now in a much more satisfactory state, and shippers begin to exhibit a renewal of confidence in the stability of the market for Breadstuffs. The uncertainty attending the legislation of Congress, in reference to taxation and currency, forms a serious impediment to the revival of activity in business. The suspension of specie payments by the Banks throws us back on a paper medium of circulation, and merchants are anxiously looking for the enactment of measures to place this on something like a reliable basis, so as to guard against the calamities which would be sure to flow from rapid fluctuations in the value of the money or the paper currency, which we are now forced to adopt, as a substitute for specie Until such time as Congress shall have made a legal provision by direct or indirect taxation, for the payment of government expenses and the public indebtedness, and thus give to the Treasury Notes and loan certificates, a permanent and reliable value, commerce will not prosper, as business men will not move freely, or be able to divest themselves of the very natural uneasiness and timidity, which they undoubtedly exhibit, at present. So far as regards our export trade in Breadstuffs, we have every reason to be satisfied with the results of each week's shipments, since the commencement of the new-year, and with the high rates at which exchange bills are selling, shippers feel disposed to continue to buy freely, if they could only be relieved from the embarrasments which they experience, as the consequence of a variable currency, fluctuating in value from day to day, and subject to serious depressions, causing very sudden and inconvenient alterations in the market for the bills of exchange which they draw against the produce they export, in order to meet their engagements with the parties of whom they purchase. The demand from the home trade is moderate. The changes in prices, during the past month, have not been very important—but a little improved for flour, as noted in the tables....There has been a lull in the market for Cotton, and serious decline in prices, in view of the expected importations from Liverpool and Bremen....The inquiry for Wool has been less active, owing in part to the firmness of holders....The trade in Provisions have been quite brisk....Moderate transactions have been reported in other commodities.

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been moderately supplied during a month past—the average receipts being but 3,709, against 4,217 for the previous month. But with a largely overstocked hog market, a good supply of mutton and poultry, beeves have not advanced in price, and it was with difficulty that all were disposed of on the regular market days. Jan. 15th, with 3,668 on sale, prices ruled at 9c.@9¼c. per lb. estimated dressed weight, for a very few premium animals; 8½c.@9c. for prime; 7c.@8c. for medium to fair; 5½c.@6½c. for poor, with an average of 7¾c. for all sold, being a decline of ¼c. for the month.

Veal Calves.—Receipts for the past 4 weeks number 1,096 or 270 per week, which is less than one half of the previous month. Prices remain as last month, viz.: 5¼c.@5½c. per lb. live weight, for fat calves, and 4c.@5c. for common to good.

Sheep and Lambs.—Receipts continue to fall off, the average for the month being only 8,017 per week. Sheep sell readily at an advance upon our last quotations of fully ½c. per lb. Good fat sheep are worth prices equivalent to 5c.@5¼c. per lb. live weight, and common stock 4¾c. Dressed mutton makes up for the falling off in receipts of live stock.

Live Hogs—Immense Receipts.—The receipts have even exceeded the previously unprecedented figures of a month ago. During the past 4 weeks **147,590** live hogs have been received in this City. This is 36,897 per week. It has been impossible to find yard room for them as fast as they arrived, much less dispose of, slaughter and pack them. This keeps the market over-stocked and prices low. Jan. 15th with 46,713 hogs for the week, they sold slowly at 3⅜c.@3½c. per lb. live weight for corn-fed, and 2¾c.@3c. for still fed.

The Weather, has been somewhat variable during the past 4 weeks. Very little snow has fallen, and we have had but little really cold weather, the mercury at no time falling below 8°, above 0.——OUR DAILY NOTES, condensed, read: *December* 21, clear, cool—22, clear A. M., cloudy P. M., heavy rain at night—23, rainy day, barometer very low, viz.: 29.20, light snow at night—24, 25, clear, cool—26, cold, cloudy P. M., heavy rain at night—27, cloudy, cool—28, cold and clear—29, 30, 31, cold. ——*January* 1, clear, warm, gale of wind at night—2, 3, 4, cold—5, clear and coldest of the season, thermometer at 8°, N. E. snow at night, continuing on the 6th, making 6 inches and fair sleighing—7, clear, cool—8, mild P. M. with rain at night—9, rain A. M., clear and warm P. M.—10, light rain—11, cloudy, with 1 inch snow and sleet—12, warm and foggy, with heavy rain at night—13, clear, cool, 14, cool, with 1 inch snow at night—15, hail A. M., rain P. M.—16, clear and fine—17, cloudy—18, a northeast rain storm, which continued through the 19th, and it is still rainy on the 20th, with danger of freshets.

Rain Fall.—The rain and melted snow for a month ending Jan. 15th, amounted to 4.79 inches. About 9 inches of snow fell, during the month. The Barometer has varied more than usual, rising 1.10 inches in 36 hours and again falling quite as suddenly.

Thermometer at 6 A. M., New-York.

Observations carefully made upon a standard Thermometer (Fahrenheit.)—*r* indicates rain—*s*, snow.]

DECEMBER.

1....34°	8......39	15......38	22......22	29......25
2....35	9......46	16......34	23......38*r*	30......30
3......24	10......44	17......38	24......28	31......26
4......22	11......46*r*	18....37	25......21	——
5......30	12....24	19....32	26....18	Average 32°
6....39	13......28	20......40	27......36*r*	
7......41	14......34	21....23	28....20	

JANUARY.

1......38	4.....18	7......24	10......34*r*	13......35
2......27	5......10	8......18	11......31*s*	14.....18
3......18	6......17*s*	9......35*r*	12......33*r*	15......28*s*

THE MAP ABOVE shows a portion of the Atlantic seaboard to which public attention is now (Jan. 20,) directed, more by guess-work than by any certain knowledge of the destination of the "Burnside Expedition." Fortress Monroe, and Norfolk, with adjacent points, are seen on the North. Sewell's Point runs up north of Norfolk, towards Fort Monroe, and defends the entrance to Norfolk. The great Inland seas or Sounds, Pamlico and Albemarle, are finely shown, with Roanoke Island between them. Also the inlets from the ocean, and the Dismal Swamp Canal, connecting the waters of Norfolk with Albemarle Sound. The Atlantic & N. C. Railroad runs northwest from Newbern, to Goldsboro', on the railroad running South from Richmond, Va., to Charleston, S. C. Weldon, N. C., on the same line, is 88 miles North of Goldsboro', and 80 miles southwest of Norfolk. Plymouth, at the head of Albemarle Sound, is equally distant southeast from Weldon, and northeast from Goldsboro'. These explanations, with this map, in connection with a school map, will aid in understanding any movement that *may* occur in the region indicated.

PREMIUM LIST,

For 1862---Vol. XXI.

Or Pay to Voluntary Agents who will attend to collecting names of new and old subscribers to the Agriculturist, and forwarding them to the Office.

Experience has proved that it is a benefit to the subscribers themselves, as well as to the Publisher, to have an *Agent* at every Post Office, to attend to collecting the names and subscriptions of old subscribers, and to present the advantages of the paper to those not yet acquainted with it. But to employ and commission a Special Agent in every neighborhood throughout the country, is out of the question. We therefore offer certain good articles, the value proportioned to the number of names sent in, and leave them open to every person disposed to attend to the business, in the locality where he or she may be known to be reliable. By giving the articles offered we can make the pay *much larger* than if in money, as we have facilities for getting the articles at low rates.

☞ In selecting articles for premiums, we have aimed to get such as are *useful*, and as have been most frequently called for by our readers. ☞ WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ We offer nothing *for competition.* Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing; every one knows just what he or she is working for.

☞ *We make no distinction between new and old subscribers*, but it is expected that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞ Every person collecting names for premiums, should send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; but if designed for premiums, two copies of each list of names should be sent—one of them marked at the top "For Premiums," and also with the name of the sender.

☞ The premiums are offered for subscribers for Volume XXI (1862), *whenever received.* Canvassers will have time for completing their lists, but the premium will be paid as soon as any club is made up—if duplicate lists are sent.

☞ Any person who has commenced sending in names at 80c. and finally fails to get the higher number of names, can fall back upon the smaller number, by remitting the 20 cents extra on each of the smaller number of names required.

☞ Clubs need not be all confined to one Post Office.

Table of Premiums for 1862.

Names of Premium Articles.	Price of Premiums.	Names at $1 each.	Names at 80 cts. each.
2—Clothes Wringer, No. 2	$7 50	18	27
3—Clothes Wringer, No. 1	$10 00	23	48
4—Sewing Machine, (Wheeler & Wilson)	$15 00	60	48
5—Sewing Machine, (Wilcox & Gibbs)	$85 00	90	120
6—Aneroid Barometer	$7 50	19	98
7—Hydropult	$12 00	30	44
8—Five Octave Melodeon (best)	$75 00	125	257
9—Six Octave Melodeon (best)	$90 00	160	182
10—Four Octave Melodeon (best)	$45 00	90	130
11—New Cyclopedia, 16 volumes	$48 00	96	140
12—Worcester's *Unabridged* Dictionary	$7 50	15	40
13—Five back Volumes Agriculturist, *p.p.*	$5 00	16	20
14—Four do do do do	$4 00	13	20
15—Three do do do do	$3 00	10	20
16—Two do do do do	$2 25		15
17—One do do do do	$1 12		10
18—Windsor & Newton's Paints	$2 50		30
19—Osborn & Hodgkinson's Paints	$1 50		15
20—Hand Corn Sheller (best)	$6 50	21	60
21—Straw and Hay Cutter (best)	$8 00	24	48
22—Best Subsoil Plow (Ohorse)	$8 00	25	48
23—Various Books—*See terms below*			
24—Boy's Chest of Tools	$8 00	18	36
25—Youth's Chest of Tools	$13 00	28	60
26—Gentleman's Chest of Tools	$20 00	45	80

DESCRIPTION OF THE PREMIUMS.—SEE REMARKS ABOVE.

Premiums. 2, 3.—Wringing Machine.

We place this first, for it is nearly new, and one of the most useful articles for every family. We had one of the first made, and have used it over a year with the highest satisfaction. It completely does away with the hard straining work required to wring out garments by hand. It does not twist and break the fibers of the clothes, but simply presses them between two elastic India-rubber rollers, which are moved by a crank, and whether large or small pieces, they come out dryer than when wrung by hand. The saving to garments would soon pay the cost of the implement, to say nothing of the saving of woman's labor. The machine is set upon the side of any tub; the garments drop out into a basket. A child can quickly wring out a tub full of clothes—No. 2, costing $7.50, is just the thing for common family use. This we present for 18 subscribers, at $1 each, (or 27 at the lowest club price of 80 cents each.)—No. 1, costing $10, is adapted to larger families and Hotels. We will present it for 23 subscribers at $1 each, (or 48 at 80 cts. each.)

Premium No. 4—Sewing Machine.

90 Subscribers at $1 each, (or 130 at 80 cents each,) will entitle the person sending them to *Wheeler & Wilson's* best **$45 Sewing Machine,** (including **Hemmer,**) new from the factory, and of the very best make. There is no

better family machine than this made, as we have proved by nearly *four years'* use in our own family, in connection with other machines. We want no better.—Premiums 4 and 5 will be selected new at the manufactories, be well boxed, and forwarded without expense to the recipient, except for freight after leaving the city. Full instructions sent for setting up and using.

Premium No. 5—Sewing Machine.

60 Subscribers at $1 each, (or 96 at 80 cents each,) will entitle the person procuring them to *Wheeler & Wilson's* **$125 Sewing Machines,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with one thread,) and has several points superior to other machines. It is neat, well-made, simple in its operation; and having tested one in our own family for more than a year, we think highly of it, and can recommend it to those who can not afford to buy the higher priced double-thread machines.

Premium No. 6—Barometer.

19 Subscribers at $1 each, (or **44** at 80 cents each,) will entitle the person getting up the club to one of *Kendall's* **Aneroid Barometers,** (Price $7.50.) This is a good, portable instrument, and valuable to every person as a weather guide, as well as for scientific purposes. We have had one in use for nearly two years, and find it not only accurate, but an admirable weather prophet. Scarcely a rain storm or gale of wind has occurred, that has not been heralded by our barometer. Each instrument is packed in a neat leather case, 6 inches square, and 4 inches deep.

Premium No. 7—Hydropult.

30 Subscribers at $1 each, (or **48** at 80 cts. each,) will entitle the person making up the club to the **Hydropult.** (Price $12,) a very useful hand implement for carrying instantly to any desired point, to throw water from a pail, tub, cistern, or other receptacle, for extinguishing fire, watering plants, washing carriages, etc., etc. A stream can be thrown up to the third story windows. It is has jet, pipe and sprinkler; is made of brass, and is durable. It weighs 8 lbs. and can be packed in small compass to go by express or otherwise.

Premium No. 8—Melodeon.

125 Subscribers at $1 each, (or **237** at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co's* **$170 Melodeons** (5 octaves). These Melodeons are of very superior tone and finish. We have ourselves used one for two years past, and it has given the highest satisfaction, and is pronounced by all who have heard it, as one of the very best. The different priced instruments are of equally good tone—differing only in the size and style of finish. The size, prices, etc., of these instruments can be learned particularly, by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for their illustrated descriptive catalogue. The instruments given as Premiums, will be sent new directly from the factory at Buffalo, ready boxed, and without expense to the recipient, except for freight.

Premium No. 9—Melodeon.

104 Subscribers at $1 each, (or **182** at 80 cents each) will entitle the person getting up the club to one of *Geo. A. Prince & Co's* **$60 Melodeons** (4½ octaves.) See No. 8.

Premium No. 10—Melodeon.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co's* **$45 Melodeons** (4 octaves.) See remarks above. In R.—Higher priced Melodeons will be given for larger lists, in the same proportion.

Premium No. 11—New Cyclopedia.

96 Subscribers at $1 each, (or **140** at 80 cents each,) will entitle the person getting up the club to a set of *Appleton's* **New American Cyclopedia,** now in course of publication, consisting of *sixteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Twelve volumes are now ready, and the remaining four will be furnished as fast as issued. The entire design of this work was 15 volumes, but it is found that the immense mass of matter will require 16 large volumes. The work is sold at $3 per volume, or $48 for the set. No better premium could any one devote the Winter evenings than in raising a club of subscribers to secure this for himself and family.

Premium No. 12—Best Dictionary.

18 Subscribers at $1 each, (or **40** at 80 cts. each,) will entitle the person getting up the club to a copy of *Webster's Pictorial Unabridged Edition of* **Worcester's Dictionary.** (Price $7.50.) This now stands confessedly the most valuable Standard Dictionary published. It weighs about **10** lbs., is **12** inches long, **10** inches wide, nearly **4** inches thick, and contains **1854 pages** of columns each, giving the spelling and pronunciation, with full explanations, of every word in the English Language, and as a source of general information on all subjects, stands next to the Cyclopedia. The Dictionary can be called for at our Office, or be sent by Express or otherwise, to any part of the country.

Premiums Nos. 13 to 17—Back Volumes.

These premiums (13 to 17,) will enable any one to secure the previous excellent volumes of the *American Agriculturist*, as far back as Volume XVI. We have stereotype plates and can print any number desired of the English Volumes 16, 17, 18, 19, and of the German Volumes 18, 19, and 20. These will be sent in clean, new numbers, each volume by itself, with index complete, and be forwarded *postpaid*. The whole can be taken together, or one or more copies of any particular volume be selected, as desired. They will be presented as in the table above, viz: For **16** Subscribers at $1 each, (or **30** at 80 cents each,) we will present **five volumes.**—For **13** Subscribers at $1 each, or **26** at 80 cents each, **four volumes.**—For **10** Subscribers at $1 each, (or **20** at 80 cents each,) **three volumes.** —For **15** Subscribers at 80 cents each, **two volumes.** —For **10** Subscribers at 80 cents each, **one volume.** —Let every one selecting these premiums be careful to name just *which* back volumes are desired.

Premium No. 18—Paints.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Windsor & Newton's* **Oil Color Paints**—consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These Paints are imported from London, and are by all considered the best in the world. They are adapted to the finest work, or they will make a neat and appropriate present to any of our young cr readers. They will be sent post-paid any where in the United States within 3000 miles.

Premium No. 19—Paints.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an Assortment of *Osborne & Hodgkinson's* **Water Color Paints,** consisting of 24 colors or shades, put up in a neat case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, will answer for ordinary practice by children or beginners, and for common sketching. Sent same as No. 18.

Premium No. 20—Corn Sheller.

21 Subscribers at $1 each, (or **40** at 80 cents each,) will entitle the person getting up the club to one of the best **$6½ Hand Corn Shellers.** This is a convenient, useful implement, very frequently called for. We give the best implement we can obtained for this price.

Premium No. 21—Hay Cutter.

24 Subscribers at $1 each, (or **48** at 80 cents each,) will entitle the person getting up the club to one of the best **$8 Straw and Hay Cutters.** This is a useful implement, needed wherever horses and cows are kept.

Premium No. 23—Subsoil Plow.

24 Subscribers at $1 each, (or **48** at 80 cents each,) will entitle the person getting up the club to the best **$8 Subsoil Plow** (two-horse), a very desirable implement.

Premium No. 23—Good Books.

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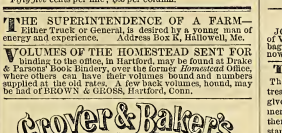

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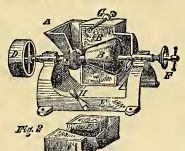

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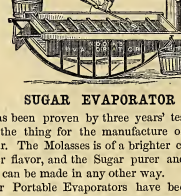

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We propose for the present season only—In view of the hardness of the times, and the fact that we are enabled to buy white paper somewhat cheaper than we have hitherto done, or can hope to do after the close of the War—to make some small acknowledgement—not so much a recompense as a slight testimonial—to those friends who shall see fit to exert themselves to obtain subscriptions (whether original or renewals) to our Weekly and Semi-Weekly editions. We do not know that we could offer anything of similar value more generally acceptable and useful than a Gold Pen of the best quality and finish. We propose, therefore, to forward to each person who, during the two months ensuing, shall send us subscriptions and payments for THE TRIBUNE, as follows:

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Public Speakers and Singers, *will find them effectual for clearing and strengthening the voice.*

Sold by all Druggists and Dealers in Medicine, at 25 cents per box.

150,000 BARRELS POUDRETTE.

Send your orders early, and you will be sure to get them filled. Address GRIFFING BROTHER & CO.,
Agricultural and Seed Warehouse,
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PROVIDENCE COMPANY'S CONCENTRATED BONE FERTILIZER.

This is the best Fertilizer, at the price, ever offered to the farmer.
It is composed of pure bone, ground fine, with other materials added of very superior quality.
It powerfully stimulates the plant from the moment the seed germinates, till harvest.
It will not outy fill the farmer's crib, but will enrich the soil, too.
It is packed in good flour barrels, and delivered to vessel or railroad, in New-York City, free of charge to farmer, at the following prices:
For one ton, $67; two, $130; three, $5; four, $5 50; five, $6; six, $9 50; seven and over, $1 50 per barrel.
Two barrels will make an acre of corn in the hill.
Send your orders, inclosing the cash, by mail to
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SUPER-PHOSPHATE OF LIME,

Manufactured from **Raw Bones,** dissolved in *Sulphuric Acid*, with a few important additions, as per *patent*, by
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(For results of Experiments, see *American Agriculturist*, for August, 1861, page 282.)

We guarantee every ton of our manufacture to be of uniform quality, and the true chemical analysis.
We also manufacture from RAW, (OR UNBURNED), BONES, the fine, medium, and coarse ground **Bone Manure,** for lasting as well as immediate effect upon all kinds of crops. The coarse ground is particularly valuable for *Fruit Trees* and *Grape Vines*, which require a constant and lasting source of nourishment.
For sale in large and small quantities by
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No. 1 Peruvian Guano—Warranted Pure.

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100,000 BARRELS
OF THE
LODI MANUFACTURING COMPANY'S
POUDRETTE,
FOR SALE BY
JAMES T. FOSTER,
No. 66 Cortlandt-st., New-York.

The large facilities which they enjoy by exclusive contract for all the night soil of the City of New-York, and large capital invested in their extensive works, enable them to manufacture an article which is superior to any other fertilizer in market, taking *cost and yield* into consideration. It will be sold at the usual price of $1 50 per barrel for seven barrels or over, delivered free in New-York City.

Please take notice that the office and sale of this Company's Poudrette is changed from Messrs. Griffing, Brother & Co., No. 69 Cortlandt-st., to No. 66 CORTLANDT-ST.

Other brands of what purports to be Poudrette are in market, put up in barrels to resemble this. Beware of frauds—buy that only which has the brand of the Lodi Manufacturing Co. Any other article is comparatively worthless.

We call the attention to the following experiences of practical farmers, in different sections of the country:

NORTH PEMBROKE, Mass., Oct. 7, 1861.

James R. Dey, Esq., President of the Lodi Manufacturing Co.:

Dear Sir—The early autumnal frosts for several years past have seriously injured our corn crops, and rendered it necessary for farmers in this section to seek some fertilizer to give their crops an early start, in order to bring them to maturity in season to avoid that calamity. Having experimented with Guano, Superphosphate of Lime, etc., with indifferent success, in the Spring of 1860 I purchased four barrels of the Lodi Manufacturing Co.'s Poudrette, which I applied principally to my corn crop, with the most satisfactory results. This was the first Poudrette ever introduced into this vicinity. Last spring I procured from your branch office in Boston about thirty barrels, the most of which I sold to my neighbors, who had witnessed the effect of my last year's trial, which, so far as has been heard from, has given universal satisfaction. To further test the efficacy of your Poudrette, this season I ploughed about two acres of light, sandy soil, which had laid in grass about six years, (the last crop of grass being very light.) This I planted with corn and potatoes, and after the ground had a half barrels of Poudrette, with no other manure, except a handful of ashes to each hill at the first hoeing. From present appearances we shall have a better crop than on a field of like soil where we applied seventy loads of manure to the acre. Its effects on garden vegetables are equally apparent. I am, very respectfully,
HORACE COLLAMORE.

MERRILL, Me., Oct. 11, 1861.

Lodi Manufacturing Co.:

Sir—I bought of your agents, Cross & Newell, two barrels of your Poudrette, and in using the first, I got sick of it and sold the other barrel. But the one that I used I tried the principal part on potatoes. I used about half a pint to the hill, and the yield was equal to those planted on manure at the rate of twenty loads to the acre. My neighbor, who bought the other barrel, says if he had bought five barrels more, he would have got the price of twenty-five.
Yours, &c., V. B. PAUL.

WALDO, Me., Oct. 12, 1861.

To the Lodi Manufacturing Co.:

Gentlemen—Last Spring I bought of Cross and Newell one barrel of your Poudrette as an experiment, but with very little faith in its utility. I put it in six rows of corn in different parts of the field, after manuring with barn-yard manure, in the usual way, at the second time hoeing. Where I put in the Poudrette the corn was twice as large as the rest of the field, and this now is one-third heavier, and has ripened about eight days earlier. I think, if the very thing we want for raising corn in this country, and shall use it more extensively another year.
Yours, &c., WELLINGTON SHOREY.

SAYBNA, Del. Oct. 1, 1861.

Gentlemen—I had heard of the Poudrette you manufactured by the Lodi Manufacturing Co., and thought I would try a small quantity on a lot of land intended for corn, and as it could not get it nearer than Philadelphia, I went and bought of the agent twenty barrels, and applied two barrels to the acre, dropping the corn and a handful of Poudrette in each hill. I left out a part of two rows, and put no Poudrette, to ascertain if there was any value in it, and noticed those two rows during the season; and where the Poudrette was used, the corn was decidedly the best, and I have no hesitancy in saying it is a good manure for corn. I am certain I made from one-third to one-half more by using it.
Yours, respectfully, JOHN G. BLACK.

CHESTER, Pa., Sept. 15, 1861.

To the Lodi Manufacturing Co.:

Gentlemen—I purchased this season of Messrs. Baker & Co., eleven barrels of Poudrette and one bag of Phuine, which I put on my corn. I marked the place where I put the Phuine, which, when started, seemed ahead, but now the corn where the Poudrette was put on is much the best. Last year I used Allen & Needle's new Fertilizer, which did no good at all, as the corn done better without the manure. I think the Poudrette made by your Company the cheapest manure in use.
Yours, &c.,
A. R. PERKINS

The Company's pamphlet, containing directions for its use, with other valuable information and the experience of over one hundred farmers, will be sent free to any one applying for the same. Address,

JAMES T. FOSTER,
Care of Lodi Manufacturing Company,
66 Cortlandt-st., N. Y.

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See Here!

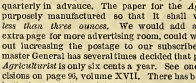
Nearly *Two Thousand* persons have already secured one or more of the good premium articles noted on page 60. But the stock is yet unexhausted, and a thousand more may still each obtain some of the useful implements, books, etc., offered.—Please look over the various topics discussed in this paper. Including the recipes, there are more than *Two Hundred* separate items in this single February number. With such a paper to show, and talk about, it would seem to be not very difficult to fill up a Premium Club already started, or to get up an entirely new one, during this month, and thus obtain cheaply a Labor-Saving and Clothes-Saving Wringer, or a Sewing Machine for the wife; a Barometer, or Hydropult, or some good back Volumes, or a Corn Sheller, or a Straw Cutter, or Sub-Soil Plow, or Chest of Tools, or Good Books, for the husband; or a fine Melodeon for the daughter, or the School, or the Church; a Chest of Tools for the boys, to teach them to be "handy;" or a Great Dictionary, or the Splendid Cyclopedia, or good Books, for the Family or for the Library of the Farmers' Club.—Not a thing is offered that is not really good and *worth* its price, and we take pleasure in presenting these things to those who circulate the *Agriculturist*, and thus benefit our list, and at the same time benefit themselves, and also those who are persuaded to *read*.

Worthy of Special Preservation.

Probably most subscribers preserve all the copies of the *Agriculturist*. Where this is not done regularly, we suggest that the present number will be worthy of special preservation for future reference. The summing up of the previous year's transactions in Breadstuffs given in the Market Review (p. 59), the statistics of the live stock markets, the numbers and prices; the weights and values of different parts of the animals, and modes of selling (p. 58); the fifty four separate recipes or directions for making Corn Bread and Corn Cake—these, and other items of information in the "Basket" and elsewhere which have cost us great labor to prepare and condense, will make this number particulary worthy of being kept. But this is only the twelfth part of a volume, and we hope and intend to make all numbers worth keeping.

The Postage on the Agriculturist is positively only Six Cents a Year.

We hear that several Post Masters are charging 12, 18, 36, and even 72 cents a year on the *Agriculturist*. This is wrong. The law expressly says that a Periodical issued at stated periods, and not weighing over 3 ounces avoirdupois, shall be charged *one cent* per number, and only *half* this sum if paid quarterly in advance. The paper for the *Agriculturist* is purposely manufactured so that it shall weigh a little *less than three ounces*. We would add an occasional extra page for more advertising room, could we do so without increasing the postage to our subscribers. The Postmaster General has several times decided that postage on the *Agriculturist* is only six cents a year. See one of these decisions on page 95, volume XVII. There has been no change in the law or in the weight of the paper since. The paper must be weighed *dry*, and *without the wrapper*. Subscribers will please promptly inform us of any future over charge.



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There is at present a good deal of interest in the subject of raising Cotton for Manufacturing Uses. We think it can be grown as far North as 40°, and perhaps further North, with profit. To do our part in stimulating experiments, we make the following offers:

I.—We will pay a Premium of **Thirty Dollars** for the Best ten pounds of Cotton (unginned), grown anywhere *North of Latitude* 40°, during the year 1862. The sample to be exhibited at the Office of the *American Agriculturist*, No. 41 Park-Row, New-York City, during the Autumn of 1862. The time of exhibition and other particulars will be published hereafter.....**$30.00.**

II.—We will pay a Premium of **Twenty Dollars** for the *Second* Best specimen of ten pounds of Cotton, grown and exhibited same as No. 1.....**$20.00.**

III.—We will pay a Premium of **Ten Dollars** for the *Third* Best specimen, (same as No. 1).....**$10.00.**

IV.—We will pay a Premium of **Twenty-five Dollars** for the Best ten pounds of Cotton (unginned), raised *South* of latitude 40°, but North of latitude 38°. To be grown and exhibited as above.....**$25.00.**

V.—We will pay a Premium of **Fifteen Dollars** for the *Second* Best specimen of ten pounds, to be grown and exhibited same as No. 4.....**$15.00.**

Notes.—The samples receiving premiums will be retained on our tables for the inspection of the public. All others will be subject to the direction of the exhibitors, at the close of the Exhibition. The *Agriculturist* having met with unprecedented success, even in these tumultuous times, we gladly set apart the above sums, as our own contribution for the purpose indicated. Probably several Associations will be prompted to make still larger offers. Chinese Sugar Cane was set down for premiums, but we see that abundant offers are already made by the various Societies. We shall therefore turn our attention to other fields of public improvement, of which future announcements will be made.

Seeds not Quite Ready.

As none of our Seeds will go South this Winter, we have not hurried their preparation as much as usual, preferring to wait until we can get all together (including those on the way from Europe,) before commencing to send any out. They will all be started in ample time to reach subscribers before they will need them to plant. The mailing of the parcels will commence the last week in February. Those intending to apply for seeds should do so early in February. (See list and directions on page 35.)

American Agriculturist.

For the Farm, Garden, and Household.

A THOROUGH-GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL-CULTURE—such as growing FIELD CROPS; ORCHARD and GARDEN FRUITS; GARDEN VEGETABLES and FLOWERS; TREES, PLANTS, and FLOWERS for the LAWN or YARD; care of DOMESTIC ANIMALS, &c., &c., and to HOUSEHOLD LABORS. It has also an interesting and instructive department for CHILDREN and YOUTH.

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All business and other communications should be addressed to the Editor and Proprietor,

ORANGE JUDD, **41** Park-Row, New York City.

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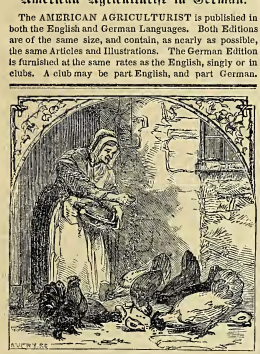
☞ **Contents, Terms, &c., on page 95.**

Entered according to act of Congress in the year 1862, by ORANGE JUDD, in the Clerk's Office of the District Court of the United States for the Southern District of New-York. ☞ **N. B.**—Every Journal is invited freely to copy any desirable articles, *if* each article or illustration copied, be duly accredited to the *American Agriculturist.*

American Agriculturist in German.

The AMERICAN AGRICULTURIST is published in both the English and German Languages. Both Editions are of the same size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs. A club may be part English, and part German.



March.

"Not only through the lenient air this change,
Delicious, breathes; the penetrative sun,
His force deep-darting to the dark retreat
Of vegetation, sets the steaming power
At large, to wander o'er the verdant earth,
In various hues; but chiefly thee, gay green!
Thou smiling Nature's universal robe." THOMSON.

There is a feeling of relief, as we reach the first day of Spring, and look back upon Winter as a matter of history. It is very comfortable to remember its frosts and storms, the sheeted earth and frozen streams, as things of the past. Whatever appliances we may use to make the Winter tolerable, it is still a period of endurance, and the farewell with which we dismiss it, is one of the few occasions in which that word sounds pleasantly to the ear. The most enthusiastic lover of sleigh rides and snow banks, skating and ice, is content to put up the sleigh, and fold up the winter furs, and to lay aside the burnished skates. The school boy houses his sled, and lays up the curling stick with a pleasure like that he feels when he takes them out for the winter campaign. The farmer draws his last sled-load of wood over the melting snow with a calm satisfaction, and is hardly displeased if it be left half way home unon the bare field, like Noah's ark on dry land. We all feel that there is something better ahead than the Winter has afforded us. Art has no power to compensate us for what we are deprived of, in the season of storm and snow. We manage to make the dwelling very comfortable by stoves and furnaces, but it is a welcome sound when the last clinker is rattled from the grate, and the furnace door creaks for the last time on its unoiled hinges, and we are glad to have the universal self-acting heater do its appointed work. We hail the lengthening of the days with a rapture that we never feel when the nights grow longer, and the darkness breaks off our unfinished task. And we do this without a thought of economy. It is true that the sun saves in the bills for light and fuel, but how few welcome the Spring with the thought that it will save coal, wood, gas, oil, or tallow candles! Instinctively we hail the opening days of Spring as good and beautiful in themselves. There is no heat like that which the sun gives, and no condition of the atmosphere so genial and enjoyable as that which the sun makes. There is no light so pleasant to the eye as the light of day. Houses are necessary evils, with all their contrivances for heating, lighting, and ventilation. We are glad when we can have twelve hours of sunlight, when we can throw open doors and windows, and drink in sunlight and fresh air, like the birds and plants.

The Winter creates dangers and difficulties which must be met and overcome, to make life at all comfortable. A good part of the Summer is spent in toil to get ready for Winter, and gives birth to an almost endless variety of industry, to meet its necessities. The plow, the loom, and the anvil are all busy, weaving, tilling, forging, to make the season endurable. The discipline under this hard master is invaluable, and it is probably for this reason that so large a portion of the human race have had their lot cast in the temperate zones. Here we find the best types of the race. They have had to struggle for a subsistence, and the conflict with frost and storm, darkness and tempest, has made them strong and heroic. We love to think of the peaceful victories of the ax, and the plow, and of all the wonderful inventions that soften the rigors of Winter, and bring us to the Spring fully prepared for its enjoyment.

These patches of bare earth, we hail them like the faces of old friends coming back to us after long absence. There is a new odor in the atmosphere, though the fields are barren, and not a flower has bloomed. Is it fancy deluding the sense, and bringing up from the yet frozen earth the breath of snow-drops and violets? There is music upon the air, though we see no bird yet perched upon the tree under our window, and the children have not announced the first note of the blue bird, or seen the first robin. It is the trickling song of the eaves, as the snow dissolves from the roof. It is the ripple of the rills as they run by every road side, carrying off the snow banks. It is the softer murmur of the wind from the "sweet south," wooing the buds in every tree top, and whispering to the yet slumbering grasses in the meadow.

We perceive all these things as we look upon the outer world from our loop-hole of retreat. And if we venture forth and hold closer communion with nature, we have still stronger evidence that the reign of Winter is over. We see it in the warmer glow of the sun at his rising and setting. We feel it in the air. Here on the sunny side of the wall, where the snow lay but yesterday, the grass has already started. Lift the covering from the flower border, and you see that the crocuses have already felt the breath of Spring, and are thrusting up their green lance points. There is a busier air in the farm-yard—cocks crowing with fiercer defiance, hens cackling in more obstreperous declaration of new laid eggs, gobblers strutting with redder heads and broader tail feathers, geese hissing at all intruders, and ducks holding a convention on family affairs in every puddle. Here are lambs just dropped, and calves frisking with tails erect, and frothy mouths, guilty of fresh drawn udders. There must be green grass not far ahead for all the new mouths that are opening to crop it.—This attitude of faith and expectation in every living thing, should be cherished by the husbandman. Nature puts honor upon this faith, in every germ that shoots up from the bosom of the earth, in every thing that moves upon its surface. The grass finds abundant aliment, and fills every hungering stomach.

We need, as a class, a much larger faith in our calling. Nature will honor all our drafts upon her bounty, and meet our largest expectations, if we work according to her laws. Here, as in a higher sphere of toil, "he that doubteth is damned." Many a busy toiler upon the farm is kept poor and discouraged by half way measures in husbandry. He has not a large-hearted, generous confidence in the capacities of the soil to reward the capital and labor he expends upon it. There is sunshine enough, and rain enough, and almost food enough, on every acre of soil, to give seventy bushels of corn, if it be skillfully managed. Sometimes it is draining, sometimes deeper plowing, sometimes more tillage, and oftener more manure, that will supply the deficiency, and give full crops. Whatever the want, it should be generously met, that we may reap the full reward of our toils. Half-way plowing, manuring, and tillage, show us skeptics in husbandry. The grand principle, so true in our spiritual relations, is quite as true in our relations to the noble art of agriculture: "Give and it shall be given unto you: good measure, pressed down, and shaken together, and running over." The genial air of the Spring should thaw out the crust of our unbelief, and make us devise liberal things for the soil.

Calendar of Operations for March, 1862.

[A glance over a table like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 38° to 45°, but will be equally applicable further North and South, by allowing for latitude.]

Farm.

Sunshine and the south wind struggle with the frosts and gales of Winter, and Spring asserts this month her right to rule. The thousand trickling rills, starting under the snow banks and gathering fresh strength and many drops from every softening sod, make hill-side and meadow musical with their liquid voices, giving man notice that water and frost have quit their hold upon the soil, and calling him to his labors. A few degrees south of New-York City, the month of March is really the beginning of Spring but in northern New-York, New-England and the North-West, Winter, and good sleighing, often continue nearly through the month. On warm well drained land work can not commence too soon after the frost and water are fairly out of the soil, but heavy soil is often injured by working while it is wet.

Buildings—Make provision for the increase of the herd and flock, and attend to inside repairs, painting, etc. Delay outside painting until next month. Heavy rains accompanied by wind will injure a coat of fresh paint.

Cattle—Some succulent food is very important to the health of all kinds of stock. Feed a few roots, mangels or rutabagas, daily. Separate cows near calving from the others, giving them wide roomy stalls or boxes. Keep watch to render assistance if necessary. Working oxen must be well fed and not allowed to overwork at first.

Cellars—Clean out decayed vegetables, superfluous sand, or lumber. Whitewash with a simple lime wash, to make them lighter, sweeter, and more healthy. Keep barrels, tubs, etc., where they will not dry or decay.

Clover—May be sowed at any time during the month—best when the ground is frost cracked on a still morning, or else upon new fallen snow, as the seed may then be seen and it can be more easily sowed.

Drains—Should be examined as soon as the frost is out of the ground to see that there are no obstructions. Wet spots in drained land indicate stoppages in drains, which can seldom be repaired before the season is dryer. A perfect system of surface drains is essential at least where underdrains are not laid, and it is more important to have them clear now than at any other season. If possible get in some new drains where needed; it will make the land 3 to 6 weeks earlier.

Farm Accounts—No work done on the farm pays better, than that done in planning and laying out the farm for the future, and in keeping full accounts.

Fences—Re-set posts and walls heaved by the frost; and mend fences before your neighbors turn out their cattle; but do not think of turning your own stock out to grass for two months yet. Happy is he who has a good fence, but happier he who can do away with one.

Grain—Examine that stored in bins. Keep from dampness, mold, insects, and rats and mice.

Grass Lands—Pull out bushes and briars by the roots, remove stones and roll heaved land as soon as the ground will bear the teams. Top dress before rolling with ashes, Chili saltpeter or guano, where desirable.

Hired Men—Lose no time in hiring *good* men for the Summer's work; the opinion prevails that labor will be scarce and wages high, but we doubt it. Don't have a shiftless, lazy, or unprincipled man on the farm at any price. Where several hands are employed, give each his own work, every team its own driver, and let the most skillful be employed in his appropriate department.

Horses—Groom thoroughly; feed carrots (4 qts. a day) to make them shed their coats well and get them in good condition for Spring work. Be particularly careful to guard against colds taken by exposure, when unblanketed, and against galls and sores.

Ice-Houses should be closed up, the ice well covered with straw, ventilation provided in the top of the house. As poor ice is better than none it may not be too late to secure some, if still needed to fill up.

Manure—Manure-making may now progress rapidly. The compost heaps will need working over, manure for the field carted out, and all kinds of litter and scrapings of yards, ditches, sinks, hen-houses, etc., may be composted with muck or earth. Barn-yard leachings, urine and castor pomace quicken inert compost heaps.

Pasture lands may receive the same treatment as grass lands, in kind if not in degree, and on old pastures bone-dust, superphosphate, or leached, or unleached ashes may be applied with good effect.

Plowing is work never to be done in a hurry or on heavy land when the water is not out of it, and never to be slighted. Manure should never be buried deep at this season, unless the land is to be plowed and manured a second time. Deepening the soil by plowing is best effected in the Autumn, but may be done in the Spring in connection with subsequent surface manuring.

Potatoes—Early planting is advisable, and the last of the month is not too early for some localities. It is much pleasanter to sell potatoes for $1.50 per bushel than 50 cents or less, and this our Eastern farmers may do.

Poultry—Give free range in the orchards and fields, feeding grain with corn and cabbages. They will then not eat buds, but find multitudes of insects. Set hens in places where they may be conveniently taken care of and out of the reach of rats.

Seeds—Secure a supply early, and test samples in pots or boxes of earth before sowing or purchasing largely.

Sheep—A successful shepherd is ever watchful, tender, and careful; follow directions given last month.

Swine—Keep a little charcoal and ashes in a corner of the sty, and a handful of flower of sulphur in the swill is a good thing at this season; feed raw roots to breeding sows but not in quantities enough to produce scouring, and give besides a nutritious diet.

Tools, etc.—We scarcely need repeat the injunction, to look well to tools, harnesses and wheel vehicles of all kinds, and have every thing ready for use.

Orchard and Nursery.

Begin work as soon as the ground is open, protecting trees from freezing after they are removed from the ground. Whoever sets out trees should not bring his trees from the nursery before his ground is ready to receive them, and nurserymen always favor their own interests when they aid their customers, even if it seems to be to their immediate disadvantage. Remove crippled or decayed trees in young orchards. On every farm new places can be found for choice fruit trees. A few dollars in trees will be a paying investment in a brief time.

Apple Trees—Scrape off all moss and bark lice, and wash with lye. Leave pruning of large limbs until Summer, but take off suckers and dead wood. Replace poor sorts by grafting with choice varieties. Graft young stocks near the roots (which may be done in the house).

Clions—Cut early in the month, if not already done. Keep covered in sand until wanted for use.

Draining greatly improves land for fruit growing, and in the nursery this is often the only time to drain conveniently. Use rather large tile.

Evergreen Trees—Leave transplanting until May, except perhaps Norway Spruce, and Arbor Vitæ, which can be removed with balls of earth adhering.

Grafting—Begin with stone fruits before the buds swell but after the sap starts; cut grafts and insert as soon as possible. Leave apples and pears until next month.

Insects—The parent of the canker worm ascends the trunks of trees during warm days this month. Many may be destroyed by surrounding the trunks with paper covered with tar mixed with oil enough to keep it soft, and often renewed. Remove scale from the trunks and main limbs, and look for caterpillar eggs near the ends of twigs.

Manures—Apply lime or ashes worked in, in a circle around the trunk as far as the shade falls at mid-day, also top-dress the soil with compost or dung.

Pear Trees—Let there be plenty of choice standards which are as valuable for both fruit and shade around the dwelling. A few dwarfs may occupy a place in the garden. Procure seedling stocks early.

Pruning—Pear and other fruit trees, except apples, may be pruned this month. Prune apple trees with the *knife only*; prune grape vines now, or wait till May.

Stone Fruits—Cherries, Peaches, Plums, etc. Let the homestead be well supplied; good fruit makes any place attractive and adds value.

Seeds of fruit or forest trees kept over Winter, should be planted as soon as the ground is mellow and warm. Sow evergreen seeds and those of mountain ash on the north side of an open fence or otherwise in half shade.

Transplanting—Preserve the roots uninjured as much as possible; pare smoothly the ends of those broken. Reset them as soon as may be after taking up; straighten out the small roots; set at the depth of natural growth in good mold, above soil enriched with compost of leaves or muck, ashes, and a small part stable manure.

Kitchen and Fruit Garden.

Nothing can be done in the open ground until the soil is dry and mellow. Then get out fine manure and spread and spade it in with a spading fork. Now-a-days nobody should use a spade except for digging holes or such like work. There is a good article on the kitchen garden on the 81st and following pages. As soon as the ground is fairly open, work must commence in earnest. The liability to be obliged to replant seeds killed by cold or wet weather, should discourage no one from committing the seeds early to the soil.

Artichokes—Seldom cultivated in this country. Fork in a dressing of manure, being careful not to injure the crowns. Salt and wood ashes are useful. Make new beds.

Asparagus—As soon as danger from frost is past, fork in the manure spread over it last Fall, and give a liberal dressing of salt. Make new beds, using 1 or 2-year old plants which are much better than old roots.

Cabbage and Cauliflower—Sow early in hot-beds, or boxes. Give constant heat and little air at first, afterwards expose much, to harden for transplanting.

Carrots—Sow in open ground, well manured.

Cold Frames—Prepare the plants for removal by continued exposure as the weather grows warmer, but protect from frost. Cabbage, lettuce, celery, etc., may be sowed in the cold frames to advantage at any time after the weather becomes settled.

Cucumbers—Start on bits of sod as described on page 83, and put a few seeds among the earliest lettuce and radish plants in the hot-bed, so that when they are pulled, cucumbers may have the soil and finally overrun the frame.

Draining will benefit any garden where water will stand in post holes 6 hours after heavy rains.

Fruit Trees—Dwarf pears are the only fruit trees we advise to plant in vegetable gardens. These will grow well but are apt to be troubled by insects, hence prune and wash such thoroughly.

Grapes—Uncover vines when the weather is settled, and there is no danger from frost. Fork manure into borders, the earlier the better after they are dry.

Hot-beds for family gardens are best made from the middle to last of the month. Have a good bottom heat and then give abundant air.

Kohl Rabi—Sow with, and treat like cabbage and cauliflower.

Lettuce—Sow early in hot-beds and cold-frames; thin, or pick out to the size one or more apart, according to variety, and stir the soil about them to induce heading.

Manure for the garden should be fine and rich compost. Nothing comes amiss if it be only well rotted. A free use of muck, sods or other vegetable mold is very desirable. Liquid manure, made by using the urine from the cattle stalls or the leachings from the dung heap very much diluted, and judiciously supplied at evening, will astonishingly increase the products of a garden.

Onions—Sow black seed early when the ground is warm, not before. Top onions, or potato onions, for early use may be set in hot-beds, cold-frames, or in the open ground—the earlier the better. Black seed sowed in September affords little bulbs for this purpose much cheaper than top onions which are generally used.

Peas—Sow Daniel O'Rourke and Champion of England when the ground is warm, scalding the seed. See pages 81, 75, and 83.

Peppers—Sow in hot-bed where lettuce is pulled.

Radishes—Sow in hot-beds devoted exclusively to them, and keep the tops as cool as possible.

Rhubarb—See article on page 83.

Sea Kale—Force early with hot manure, covering the crowns with pots or boxes.

Seeds—See hints under Farm operations.

Small Fruits—Currants and Gooseberries, prune and set cuttings, if not done in September. Raspberries, do not lift or tie to stakes before settled weather.

Strawberries—Rake off the beds, fork in fine compost with unleached ashes.

Spinach—Uncover protected beds, loosen the soil, water with liquid manure; sow new beds in warm rich soil.

Sweet Potatoes—Lay whole in the hot-bed, barely covered—for sets for planting.

Turnips—Sow a few as directed for radishes, and in the open ground.

Flower Garden and Lawn.

Wait until the ground is settled warm before exposing tender plants, by removing their Winter protection, and before sowing seed. Many of the perennial flowering plants may be divided and reset, by which an earlier and more perfect bloom will be obtained. Among these are the peony, dicentra, chrysanthemum, sweet william, hollyhock, bee-larkspur, phlox, etc.

Flowering shrubs, especially the early blooming sorts, may also be transplanted as soon as the severity of Winter is past and there is no danger of the ground freezing up again. The disturbance of their rootlets, and the openness of the soil about newly planted trees, or shrubs render them susceptible to injury from hard freezing.

Cuttings of hardy shrubs, etc., such as altheas, spiræas, weigelias, forsythias, lonicbras and the like, may be taken off early in the month before the buds swell. Keep in boxes of earth or sand in the cellar until planting.

Bulb beds which had a coating of manure, leaves, or straw given them for a Winter protection, may be partially or wholly uncovered, toward the latter part of the month; whatever covering they have during March should be light and strawy.

Pruning of roses, and other flowering shrubs, and climbing plants may be done at once. Each plant should be cut back with reference to its flowering habit. By strongly heading back those shrubs which only yield flowers upon the terminal branches or on the old wood, as the magnolia, spiræa, etc., the bloom is nearly destroyed. Roses, especially remontants (or "semi-occasional" bloomers) may be cut back severely, and a finer Autumn bloom is the result.

Box Edgings—May be re-set as soon as the soil is in condition to work. Spread each plant out somewhat fan-shaped, clip off the tops even, and prune the root very close, netting in trench by a line, in sand to secure quick rooting, and pack the earth about the plants with a mallet or pounder.

Grass borders, and turfing generally, may be laid or repaired very early in the season better than later. Let the soil below be mellow, and pack the sods so closely and firmly that there shall be no sinking.

Manure may be purchased at this season rather more favorably, considering every thing, than at any other time. Manure evenly applied upon the land, whether leached or unleached ashes, nitrates, guano, or ammoniacal water, will each and all produce good results, and the present is the best time to manure shrubery and ornamental trees of all kinds for which coarser manures may be used.

Hot-Beds made for starting cuttings, and for sowing seeds are quite indispensable on a large place. Green cuttings, or those of soft wooded plants, need considerable bottom heat, and to be kept cool at top until they strike root. A very little moisture, and give good ventilation, gradually hardening them until they are planted out.

Green and Hot-Houses.

The green-houses and conservatories should now be very attractive, although some of the more showy plants will have gone out of bloom. Everything should be kept neat, with no rubbish, plant trimmings, dead leaves, moss covered pots or boxes, left upon the floor or shelves, or dust suffered to collect upon the leaves. The rooms should be aired frequently when the weather is suitable, avoiding a chilling draft directly upon the plants.

Heat must be regulated according to the object in view. If the house is merely a receptacle of plants designed to be kept from the frost, and which are to bloom in the open borders, then a moderate fire heat, with the thermometer from 40° to 45°, is sufficient. With a collection intended for present flowering, or for inducing a rapid growth to use when the out-door planting season arrives, a temperature of 60° to 75° is needed; and for orchids and other tropical plants, as also for propagating purposes, the houses or rooms may have a temperature of 90° in the sunshine, which must be allowed to fall off naturally at night.

Acacias, heaths, azaleas, and epacris, should be shaded from the direct rays of the sun.

Annuals—Sow in pots as occasion offers, for turning out into the borders in May.

Bedding Plants—Push forward those started last month, pinching in and regulating their shape.

Cacti—Water those showing flower.

Camellias—Those which have done flowering, examine for red spider; wash foliage, syringe, and prune.

Carnations—Make cuttings, set out the old plants for layers; never keep plants more than one Winter.

Frechsias, Chrysanthemums, etc., may be now propagated by cuttings from the new wood. Repot and prune established plants.

Geraniums, pelargoniums, Chinese primroses, cinerarias in or near bloom, keep near the glass, turning frequently.

Insects—Destroy by washing and tobacco fumes.

Pansies are best kept in cold frames, and should be aired and kept back by not admitting the light and heat.

Parlor Plants require even more care than those of the Hot-House. It is an excellent plan to set the pots in larger ones of the same material or of tin, and cover the earth with moss to retain moisture. They will also require frequent turning, especially if growing near the window, to keep them in an erect position. See that the drainage is good and only enough water given to keep the plants in a healthy state; the surface soil may have a dry appearance when there is sufficient moisture at the root. Be sure that there is abundant water always evaporating in the room, or in connection with the fire.

Roses—Established cuttings and plants for early out-door blooming, need re-potting.

Water is required in proportion to the growth of plants. As most plants are now pushing out vigorously, syringe the walls and foliage of plants, and wet the floors to induce a moist atmosphere from evaporation. It will also tend to keep insects in check. The water should not be of a much lower temperature than the atmosphere of the house.

Grapery and Orchard-House.

Cold graperies should be thoroughly whitewashed, mixing flower of sulphur with the wash; the vines may be lifted as the weather moderates, air given on fine days, and the borders watered with liquid manure. Do not tie up to the rafters until all the buds have pushed equally, and keep the house moist when buds are breaking. In more advanced houses, give abundant air, especially where there is bloom; syringe often; thin out superfluous branches.

Orchard House—Give trees in pots and tubs liquid manure in moderate quantities, syringe walls and doors often, and give air freely on mild days. Thin out the fruit. Trees rooted in the ground require manuring and watering quite freely.

Apiary in March.

Prepared by M. Quinby—by request.

The bees will begin to fly pretty freely this month, and in many places to collect pollen. In some sections but little is to be obtained until quite late, yet the weather is often warm enough for extensive breeding in good stocks, if pollen is abundant. The utility of flour as a substitute for pollen is pretty well established. It is difficult, sometimes, to get them to take it, especially when offered after a little is obtained from the flowers, but when given early, and a taste for it acquired, they will use large quantities. If it were of no use whatever after being taken into the hive, I still think it would pay, by keeping the bees employed while they might be getting into mischief by quarreling with, or robbing some of the weaker colonies of the yard, and destroying large numbers. To feed the flour, make a floor several feet square, the size proportioned to the number in stocks. Build it in a warm place within a few rods of the apiary. The unbolted wheat flour is best, but not essential, any kind of flour will probably do; buckwheat, I am informed, has been used extensively. If it has been bolted, mix it with saw-dust, chaff, oats, straw finely cut, or any light substance to prevent its adhering too readily to their bodies. Begin by scattering some on the ground or in the grass near the floor; they will usually find it in a few hours. Keep them busy by feeding every fair day. Perhaps a little caution is necessary not to feed too much. Although I have never been able to find any left in the combs at the end of the season, or to discover any bad effect from giving too much, yet I apprehend their combs might be filled with it to the exclusion of brood. It would probably be safe to give what would average two or three pounds to the hive.

If warm weather should make the bees in the house uneasy, the room should be cooled, and the bees quieted, by putting snow or ice on the floor, until a fine day occurs for putting them out. For removing them, choose a clear warm day. When practicable let each hive occupy its old stand. Set out a dozen, and two hours later, as many more. Put the first as far apart as possible, and fill up the vacant stands as others are afterwards brought out; they will mix together less in the confusion of their first issuing, and a less number be lost by entering the wrong hive on returning. Any stock having lost its queen during Winter, will be likely to show it near evening of the first day they fly out freely, by running about in apparent confusion. A queenless colony now should be united with some feeble stock, unless the queenless one is much superior in numbers, and in other respects will make the best stock; in which case, *that* should receive the bees from the other. The combs and honey of a queenless hive, if all right, may be set away for a new swarm, taking care to smoke with brimstone once or twice to destroy the worms as they hatch out. If the colony that contains the queen is the one removed, there will be some brood in the combs necessary to be taken out before putting away. Be careful and not save for a new swarm any combs containing foul brood. Ascertain the strength of each stock by thorough examination some cool morning. Contract the entrance of the weak ones, till only a single bee can pass at once. Watch for robbing bees on the first warm days—it requires close observation to detect it at first. Ascertain which are destitute of stores, and feed as they require it, taking care not to expose any honey where other bees may get to it.

Seeds for Free Distribution to all Subscribers for 1862 (Vol. 21.).

Every subscriber to the Agriculturist for 1862, is invited to select four or five packets of seeds from the list below.

These seeds are all valuable. Of the 90 kinds offered, many are new varieties, but we include some common useful sorts for convenience of those without seeds to good seeds.

Most of them are annuals (reproducing seed the first season), and in all cases there will be enough to yield a good supply for future use. Our aim is to furnish the germs of future abundance in each locality where these seeds go.

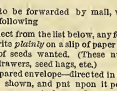
Many of these seeds were grown by ourselves, the past year; the others are obtained from the most reliable seed men and in Europe. The distribution is now going on—will close soon

Mode of Distribution.—The seeds may be called for at the office, or be applied for by mail at any time now The postage is only **1 cent per ounce under 1500 miles; and 2 cents per ounce when over 1500 miles.**

Those sending for seeds to be forwarded by mail, will please *carefully* observe the following

DIRECTIONS—(1). Select from the list below, any four or five parcels desired, and write *plainly* on a slip of paper the *numbers* (only) of the kinds of seeds wanted. (These numbers are used on our seed drawers, seed bags, etc.)

(2) Enclose the slip in a prepared envelope—directed in full to your own address, as here shown, and put upon it postage stamps to the amount of **one cent *for each ounce*** *of seeds to be enclosed*, if to go **under 1500 miles, or two cents** if to go **over 1500 miles.** (Most places West of the Mississippi river are over 1500 miles.) N.B.—The total amount of stamps required can be reckoned from the table of seeds below. Any fraction over even ounces will need a full postage stamp. Use 1-cent stamps according to distance. Forward the above prepared envelopes to this office, and the seeds will be enclosed according to the numbers on the enclosed slip. To save letter postage, let there be *no matter* of business or any other except address and stamps. About 2 ounces will go in a common sized envelope



Field, and Vegetable Garden Seeds.

No.		Weight of package.
185	—Long Bearded Spring Wheat	
3	—Improved King Philip Corn	One or two ounces.
141	—Darling's Early Dent Corn	About one ounce.
186	—Evergreen Sweet Corn	" "
98	—Long Red Mangel Wurtzel	About one ounce.
187	—Conn. Broad Leaf Tobacco	About one-eighth ounce.
188	—Cuculbe Half Long Tobacco	About one-eighth ounce.
189	—Spelt or German Wheat	About one-eighth ounce.
190	—Six Rowed Barley	About one ounce.
8	—Daniel O'Rourke Pea	About one ounce.
9	—Champion of England Pea	About one ounce.
99	—Prince Albert Pea	About one ounce.
12	—Green Kohl Rabi	About one-fourth ounce.
13	—Enfield Market Cabbage	About one-fourth ounce.
15	—Flat Dutch (Winter) Cabbage	About one-fourth ounce.
16	—Imported Scotch Cabbage	About one-fourth ounce.
199	—Red Dutch Cabbage	About one-fourth ounce.
63	—Extra early Round Turnip (Radish)	About one-fourth ounce.
156	—Early Paris Cauliflower	About one-eighth ounce.
74	—Venetian Cabbage Lettuce	About one-fourth ounce.
75	—Imported Brussels Sprouts	About one-eighth ounce.
101	—Improved Long Orange Carrot	About one-half ounce.
148	—Long dark Blood Beet	About one-half ounce.
194	—Extra early Bassano Pea	About one-half ounce.
95	—Hubbard Squash, pure	About one-fourth ounce.
195	—Fejee & Italian Red Tomato	About one-eighth ounce.
154	—Ice-cream Water Melon	About one-eighth ounce.
196	—Skillman's Netted Muskmelon	About one-eighth ounce.
194	—Hollow Crown Parsnip	About one-fourth ounce.
66	—Extra Curled Parsley	About one-fourth ounce.
197	—Early Danvers Onion	About one-fourth ounce.
152	—Fine Large Cheese Pumpkin	About one-fourth ounce.
17	—Red Strap Leaf Turnip	About one-fourth ounce.
71	—Long White French Turnip	About one-half ounce.
195	—Early Short Horn Carrot	About one-fourth ounce.
74	—Solid White Celery	About one-fourth ounce.
102	—Sage	About one-eighth ounce.
156	—Summer Savory	About one-eighth ounce.
198	—Long Prickly Cucumber	About one-eighth ounce.
196	—Green Curled Kale	About one-fourth ounce.
198	—Improved Large Early Frame	About one-fourth ounce.
21	—Winter Cherry	About one-eighth ounce.
197	—Linneus Rhubarb	About one-half ounce.

Flower and Ornamental Seeds.

89	—Cotton Plant (2 kinds, mixed)	One-half ounce.
111	—Castor Oil Bean	One-half ounce.

On an average any **five** *of the following varieties will go under one 1-cent stamp, (or two stamps if* over 1500 miles.)

200	—Fancy Gourds, (mixed varieties) *(An.)*	124	—Wyndvia, *(An)*
201	—Scarlet Chinese Egg Plant, *(An)*	40	—Candytuft, *(An)*
202	—Ashmated Oats, *(An)*	123	—Gilia mvalis, *(An)*
177	—Quaking Grass, *(An)*	182	—Sweet Alyssum, *(An)*
33	—Mignonette, *(An)*	169	—Clarkia pulchella, *(An)*
35	—Mix'd Nasturtium, *(An)*	170	—Mixed Salpiglossis, *(An)*
32	—Calliopsis Pink, *(An)*	168	—Swan River Daisy, *(An)*
32	—Portulacca Mix'd, *(An)*	213	—Xeranthemum Annum *(An)*
34	—Phlox Drummondii, *(An)*	40	—Eschscholtzia Californica, *(An)*
30	—Tassel Flower, *(An)*	126	—Long tubed Cintranthis, *(An)*
37	—Sensitive Zinnia, (Mixed) *(An)*	216	—Acrocliniun Roseum, *(An)*
205	—Double French Marigold, *(An)*	214	—Balloon Vine, *(An)*
183	—Fine Mixed German Asters, *(An)*	27	—Cockscomb, *(An)*
206	—Golden Straw Flower, *(An)*	33	—Cypress Vine, *(An)*
208	—Crimson Globe Amaranth, (everlasting) *(An)*	207	—Ibidanthæ Musgiesii, (everlasting) *(An)*
210	—Convolvulus Tricolor, *(An)*	122	—Mixed Canterbury Bells, *(An)*
172	—Mixed Larkspur, *(An)*	125	—Standing Cypress, *(An)*
167	—Malope Grandiflora, *(An)*	43	—Poppiwes, *(An)*
211	—Fine Mixed Lupins, *(An)*	209	—Dwf Flute Larkspur, *(hp)*
212	—Fine Sweet Peas, *(An)*	171	—Forget-Me-not, *(hhp)*

* *(An.)* hardy annual; *(hAn.)* half hardy annual; *(tn.)* tender annual; *(hhh.)* half hardy biennial; *(tb.)* tender biennial; *(hp.)* hardy perennial; *(hhp.)* half hardy perennial; *(tp.)* tender perennial.

Containing a great variety of Items, including many good Hints and Suggestions which we give here in small type and condensed form, for want of space elsewhere.

The Boys and Girls will please consider the map on page 89 *all their own*. This map was prepared for page 92, but the advertisers demanded that, and though an unusual number of good items, puzzles, etc., were prepared for page 89, we conclude our young friends will prefer the map in these stirring times. The war will soon be over, and now is a good time to fix the geography of the country indelibly in the mind.

Our "War Map" on page 89 gives the outline of a region likely to continue to be the scene of stirring events during the next few weeks. By the crooked route of the Mississippi river it is 1040 miles from Cairo to New-Orleans, though only about 480 miles in a direct line. The reader will readily find Fort Henry, Florence, etc., on the Tennessee river; Dover, or Fort Donelson, Clarksville, Nashville, etc., on the Cumberland; Pensacola and Fort Pickens on the Gulf of Mexico, etc. This map, with those of sundry sections of the Atlantic Coast in previous numbers, and especially the three large and very full maps in November of Kentucky, Tennessee, Missouri, and Eastern Virginia, afford the reader means of finding most of the localities of interest during the present war. Those newer subscribers who have not had the November *Agriculturist*, will probably find it worth while to send 10 cents for a post-paid copy.] Our beautiful map of Eastern North Carolina, given last month, came in admirable time to use in connection with the events of the Burnside expedition, and many have already said it was worth to them the price of the whole volume.

The Seeds Going.—A busy place is our Seed Department now. The mailing commenced at a rapid rate on Feb. 18. But, with all the force we can put on, it will perhaps take to nearly the end of March to forward the hundreds of thousands of parcels already called for. Subscribers need not consider their seed letters miscarried by mail or lost, if they do not get a reply or box so far applied for, before March 30. Those hereafter called for will perhaps reach them later. We regret that some did not read more carefully the simple rules over the seed list, for then we should not find envelopes with no indication of what is wanted; others with the old style P. O. stamps, which require us to put on new stamps at our own expense; others with the numbers written on the *outside*, involving the labor of preparing new envelopes, and transferring the stamps, a thing of no little difficulty; and others so very small as not to hold half the seeds indicated, which involves a new envelope or the piecing out of the old one; and others with too many stamps, a needless expense to the sender.—But hoping for more care hereafter, we will be as patient as possible. We take real pleasure in sending to our subscribers, at so moderate an expense comparatively for each, these parcels of seed which would have cost them 10 to 50 cents or more, where they could have got them at all otherwise.

Pure Chinese Sugar Cane Seed wanted.—From all accounts, it seems that much of the Sorghum or Chinese Sugar Cane seed in the country has been somewhat deteriorated by hybridizing with other plants of the same genus, such as dourrah corn, broom corn, imphee, etc. We have very frequent inquiries as to where pure seed can be obtained, but cannot answer them. Those who have seed to part with, the purity of which they can establish beyond doubt, should advertise the fact: there will be plenty of purchasers. Deeming the matter one of public interest, we several weeks since wrote to a reliable and competent friend in France, to see what could be done there, and if he could find seed positively good, to secure for us all that he could get, at any cost. He is canvassing the country, but has not yet advised us with what success. We expect to hear soon, and if we get the seed, the fact will be announced in the April *Agriculturist*, in ample season for planting.

Sorghum Manufacturers Wanted.—It is as easy to raise an acre of Sorghum, or Chinese Sugar Cane, as an acre of corn. Both require about the same soil and culture. The main difficulty is, that every man disposed to try a small plot does not want to go to the expense and trouble of procuring grinding mills, boilers, etc., nor would it pay on a small scale. We suggest that it would be well for one or more persons in each locality where this crop is likely to be grown, to make arrangements *now* to procure and set up the apparatus, and make contracts with farmers to take the cane and grind it, and boil the syrup, at a stipulated toll. One establishment will answer for from fifteen to thirty persons who only cultivate one to half a dozen acres. It is better that the business should be conducted by a single individual, than for persons to club together, and all have a hand in it. From what we can gather, we estimate that the manufacturer would make a good profit on the clear canes as brought to the mill, and returned sixty gallons of syrup in the one hundred, to the grower; and at this rate it would be better for the latter than to attempt to manufacture on a small scale.

What Tobacco Seed to Sow.—In New-England, sow the "Connecticut Seed Leaf" variety. The same is best for most sections of New-York, Ohio, and Northern Pennsylvania. In other districts it is best to use the seed of that variety for which there is an established market. Tobacco accommodates itself to the locality very much. Havana seed, in Connecticut, soon changes its character, and the broad leaf variety, called "Connecticut Seed Leaf," was brought originally from Maryland, and was modified by culture on the rich meadows of the Connecticut valley. It retains its changed character to a great extent in Ohio.

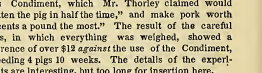
Cotton Grown in Pennsylvania.—Ezra Michener, M. D., Chester Co., Pa., sends for the *Agriculturist Exhibition Tables* a fair sample of unbleached muslin, of which 17 yards were made in that county from cotton grown there by himself. He writes: "In 1858 I obtained seed from a cotton manufacturer, and planted it the same as corn, without manure or extra tillage. It grew well, and the first bolls opened about the middle of ninth month, (Sept.) The cotton was gathered as fast as they opened. Early in tenth month the plants were killed by frost, but many of the maturer plants continued to yield a staple little inferior to the first gathered. ....The fiber was cleaned with a simple home-made machine, consisting of two rollers, one of them turned with a crank, which easily and rapidly pulled off the fiber from the seed....The following season was unfavorable, and no matured cotton was obtained...."

Northern Cotton—Transplanting. The recommendation to sow cotton in a hot-bed and transplant like tobacco or lettuce, must be followed with caution. The cotton plant is *exceedingly* impatient of removal, and must be moved *so as not to know it*. Hence, sow on bits of sod 4 inches square, or in 3 inch pots of good soil, leave in the hot-bed, and transplant to the open ground when danger from frost is past, taking great care not to break the soil or balls of earth turned out of the pots.

To Officers of Agricultural Societies.—We have received several letters, saying that circulars have been sent out to Agricultural Societies, offering 20 copies of a so-called Agricultural paper, without charge, if the prospectus of the paper be printed on the covers of the premium lists; it is asked if the publisher of the *Agriculturist* will do the same. We answer, No; for two reasons: 1st, we trust it is not necessary to give away copies of this journal for the sake of securing the good influence of its being placed on premium lists. 2d. We can not afford it. The *Agriculturist* is wholly a self-supporting institution, and each copy must pay its own way. If we were engaged in other business, and had artificial manures or implements to sell, we might give away hundreds of copies, providing the giving a man a dollar paper put it in our power to induce him to buy artificial manures or implements that would yield us a profit of five to twenty dollars, or more. It would be a good speculation.—However, a good, reliable Agricultural paper is the best premium a Society can give—it is a living, oft-repeated premium, one that stimulates to improvement, and directly benefits a Society. To Premium Committees who think the *Agriculturist* worthy a place in their lists, we will supply the paper as low as we can consistently with our obligations to full paying subscribers. Large numbers of copies are now sent in this way, and have been for years past.

A Bureau of Agriculture.—Congress has at last so far recognized the great Agricultural interest of the country, as to detach it from its long time position of an appendage to the Patent Office, and provided an independent Bureau of Agriculture, having an officer at the head with a salary of $3,000 a year. So far, so good. But if the new Department is to be an improvement upon the old nuisance, it should be placed under the direction of an intelligent, capable, honest man, with special talents and qualifications for the post; one who can take in a broad view of the general agricultural and horticultural interests of the whole country. He must have higher aims than the annual issue of a recipe book got up for Congressmen to send as a tickler to their country constituents. Let us have then, no quack whose chief recommendation is the number of times he has got his name into the papers as a patron of Agricultural shows; nor some self-dubbed "Professor of Scientific Agriculture;" nor an impractical theorist; nor an opinionated "old fogy;" nor one who is not honest enough in providing seeds or plants for distribution to look to the object to be attained, more than to the amount of private per centage that the dealer in old stock will allow him. We will hope for better things now.

"Thorley's Cattle Food."—This so-called food for animals has been as widely puffed and as largely sold in England, as some of the Sarsaparilla syrups (molasses and water) in this country. An agency was established here some time ago and the City and surrounding country literally plastered with flaming showbills. Supposing it to be in the Patent medicine line, we even refused to advertise it. The effects upon animals *claimed* for it, (sickness of hair and plumpness of carcass,) indicated arsenic or antimony. We privately procured some and had it tested at the Yale College Laboratory, but neither of these substances were found. We therefore waited for the practical test, which has now come in authentic form. Dr. J. B. Lawes, of Rothamstead, procured 8 pigs every way alike, divided them into two lots of four each, giving both lots all the barley meal they would eat, but fed one lot the prescribed amount of Thorley's Condiment, which Mr. Thorley claimed would "fatten the pig in half the time," and make pork worth "4 cents a pound the most." The result of the careful trials, in which everything was weighed, showed a difference of over $12 *against* the use of the Condiment, in feeding 4 pigs 10 weeks. The details of the experiments are interesting, but too long for insertion here.



Elder Sap-Spouts.—Some subscriber, whose name and address we have mislaid, recently sent a sketch of his mode of making sap-spouts, or "spiles." He cuts the common elder stalks into convenient lengths, then saws half through on alternate sides, at a and b, and with a chisel splits the piece in two. The pith is pushed out and the ends beveled for entering the auger holes in the trees, as described last month. Such spouts are very rapidly made wherever good elder stalks are to be found.

A Family "Mangle" Wanted.—Now that we can *wring* clothes with a first-rate machine, it is well suggested by a lady reader of the *Agriculturist*, that there is a fortune, and the blessings of all good housewives, in store for the Yankee who shall get up a good, practical family mangle, or ironing machine. She has seen such implements in private families in Europe, that are far better than nothing, but thinks the Yankees can get up a superior one. We heartily second the suggestion.

Onion Culture—New Edition.—The large demand for this valuable Pamphlet (giving the experience of 17 practical Onion Growers,) has rendered a 3d edition necessary—now ready. (Price post-paid, 21 cts.)

Flora Temple.—This famous trotter has been withdrawn from participating in the sports of the course, for the purpose, it is said, of perpetuating her rare qualities in her offspring. It will be hard to keep the "Queen of the trotting Course" away from the scene of so many victories.

Diamonds for Dressing Millstones.—A paragraph on this topic last month closed with a query. Since then a card has come in for our advertising columns indicating that the diamonds were for sale near at hand. Before receiving the advertisement we dropped in to see if the thing were a reality. After looking into the matter a little we begin to think that the thing is not so impracticable after all. Mr. Dickinson's apparatus does seem to do the dressing easily and quickly and that too with a diamond weighing only one-fourth of a caret. The common glaziers' diamonds weigh about one thirtieth of a caret. We should judge the subject worthy the investigation of millers. Mr. D. has left with us one of the diamonds and his new guide, which we shall hand over to a friend, who is a miller, to test.

Starting Delaware Cuttings by Grafting.—Chas. B. Ott, of Bucks Co., Pa., grafted Delaware upon the common frost grape last April, in the following manner: The wild vine was put down as a layer, split through with a knife along the whole length, at intervals of one foot each, and the Delaware cions of two eyes each were shaved down and set in the slits, and the earth filled in around them to the upper eye. About three fourths of them lived, and some made a growth of 15 feet. The wild vine was about one inch in diameter, and the top end was left out of ground to keep it alive

Liquid Medicine Dangerous for Horses.—It is difficult to induce a horse to take fluid medicine, and he is very likely to get it into his lungs and thus produce spasmodic coughing and sometimes, permanent disease, or "broken wind." According to experiments instituted in Hanover (Germany), horses have even been killed in this way. Use medicines in the form of powders, agreeable drinks, or mashes, pills, etc.

Galls on Horses Cured.—E. R. Churchill, Hillsboro' Co., N. H., writes to the *Agriculturist:* "Is it generally known that arnica flowers digested in spirit cures galls on horses very quickly, applied several times a day? It cured a very obstinate case on my own horse last Summer." (The dried flowers are sold at drug stores.)

Bloody Milk.—L. N. P., Ottawa City, Iowa. Garget is probably the cause. Feed a teaspoonful of saltpetre twice daily, and if the bag is caked and sore, rub it with equal parts of arnica tincture and warm water which will take the soreness out, and then rub and *knead* it.

Soiling Stock.—"Subscriber" at Jennerville, Chester Co., Pa., wishes to see in the *Agriculturist* the Dr. and Cr. side of some well conducted soiling experiments, extending through a considerable period. He wishes to know how it affects the health of stock, about the gain in the manure heap, and whether it will pay. There are readers of the *Agriculturist* who are experienced in this—will they respond with the particulars?

The Monster Hog.—We published in the February *Agriculturist* the statement given us by the butchers of the weight, etc., of an immense hog. From the gentleman upon whose farm it was fattened—Mr. Frank Lathrop, of Morris Co., N. J.— we learn that when 2 yrs. 8 mos. old, five months before he was killed, he weighed 1,035 lbs.; that he was imported by David Leavitt, jr., Esq., of Great Barrington, Mass., with the following pedigree: "Bred by Earl of Sefton, Croxteth Hall, Lancashire, England. Pigged Dec. 1, 1858, got by Young Tinker out of Maria; Young Tinker by old Tinker; he by Bruiser; he by Burster, and he by the Berkshire Boar, who weighed 1,175 lbs., when 2 years and 3 months old, and was supposed to be the weightiest pig of his age England has produced. Maria is out of Sal; Sal, by Mot; Mot, a lineal descendant of the Suffolk Punchster, the greatest pig of his age." (Signed), WM. LITTLE, JR.

Farm Steward of the Earl of Sefton.

His weight was stated by Lilly & Brower, who butchered him, to be 1,393 lbs. alive, and 1,053 dressed.

The French Cure for Sheep Rot.—We do not remember to have mentioned that in France during the past year a medicine has come into pretty extensive sale for the rot, a disease which prevails much more generally in Europe than in this country. So great were the claims for this remedy, that the Royal Agricultural Society of England deemed it worth while to appropriate £12 ($60), for the expense of a trial of it in England. Prof. Simonds was entrusted with the experiments, and after a faithful trial during last Summer, he reports that no good results were apparent. It is therefore to be classed with the thousand and one humbug nostrums, cures for consumption, etc., that get notoriety by advertising, deceptive certificates, etc.

Sheep Wanted at the West.—In a letter of Feb. 5th, from F. W. Windship, of Princeton, Bureau Co., Ill., he remarks incidentally: "We want five to ten thousand sheep in this County immediately. Where can we get them, and at what price? If any one can tell, let him address the Secretary of our County Agricultural Society, or myself." (Mr. W. is County Surveyor.)—Similar inquiries come from other points at the West, as well as from some localities in the East. We do not know how the want will be supplied. Farmers are becoming more alive to the profitableness of sheep raising, and probably very few would now be willing to part with their flocks at prices they would be likely to be offered for them. We suggest in this connection, the importance of taking good care of the breeding ewes at this season. Keep them in good heart, not too fat, and let the greatest care be exercised to save and raise all the lambs dropped this Spring.

Sheep—Relative value of Breeds in England.—In the prize sheet for the next Show of the Royal Agricultural Society, prizes of $100 (£20) are offered for the best shearling ram, for the best ram of any age, and for the best pen of five shearling ewes. These are for Leicesters, and Southdowns. Only $75 (£15) are offered for the same classes of Lincolns, Cotswolds, and Kentish or Romney Marsh breeds. Quite a little breeze is being raised by the graziers of the last named three breeds, for, as says one of the number, "this course of the Society is to inform foreigners who come to the Show to buy sheep, that the Cotswold, Lincoln and Kentish are only *second* class sheep, whereas, we (the graziers) think them the most *useful* and profitable class of sheep in the Kingdom ..." A strong appeal is made to the breeders to vote out of office the members of the Council who have made the distinction.

How to Prove the Vitality of Eggs.—De Berri, Rye, N. Y., writes to the *American Agriculturist:* It is emphatically "Love's labor lost" to set her on eggs lacking vitality. For some years I have generally been successful in "counting my chickens before they were hatched." About the 2nd week in March I select *fresh* eggs of a *medium* size, and set as many hens as possible at the same time. After three days examine the eggs at night with a light, those having the embryo chick will appear dark, while those lacking vitality will look clear as ever, remove them as they will not hatch, but are still fit for family use; transfer the good eggs from one nest to another to make up deficiencies, and give the robbed hens fresh eggs.

Yellow Butter in Winter.—R. Downs, New-Haven Co., Conn., puts the cream into the churn, stirs it for a few minutes, and then adds the juice of a good sized yellow carrot. The carrot is grated or scraped fine and mixed with a pint of new milk, and left to soak for a short time, then strained through a very fine sieve or cloth and the liquid added to the cream in the churn. The butter will be as yellow as if made in Summer, with no carrot taste.

"Milk for Babes."—D. J. F., of Troy, writes to the *Agriculturist* dissenting from a view expressed by a writer in this journal, and giving his own practice. He says, "I have had 15 years experience in feeding the unmixed milk from a single cow to infants, sometimes to as many as 7 at once, and have never found a *furrow cow's* milk that a child would thrive on. There are but few new milch cows whose milk is good for infants. When I commence leaving milk for a young child, I always inquire after its health for a week at least, if the milk makes it sick, I change to another cow, and continue to do so until I find milk that is good for the child, then I do not change till the child is weaned, if the cow remains well. Not one milkman in ten is honest in carrying one cow's milk. They find it very convenient to supply the baby's milk out of a 60 quart can.

Concentrated Milk.—Cynthia M. Green, Broome Co., N. Y. No patented process is secret—the Government grants exclusive rights for a term of years, in consideration of the full disclosure, or making *patent*, of the process or method. This milk is concentrated by an expensive process, which is, we believe, patented. The milk is purified, and very rapidly boiled down by means of steam heat and an air-pump at a temperature considerably below that of boiling water, (about 160°,) until 5 gallons are reduced to 1, in which condition it is marketed, and when used it is reduced by the addition of five times as much water and a little salt, which it seems to need, in order to restore the flavor of *fresh* milk.

Lime on a "Truck" Patch.—M. B., of Clinton Co., Pa., asks if it will do to put fresh lime on a "truck" patch. If the soil is rather heavy and has been long receiving its annual supply of manure, or contains much vegetable matter, lime will probably be an excellent application. Apply about a peck to the square rod, sowing on the surface, and working it in. Lime is said to improve a light land. By no means mix it with manure, for its action will set ammonia free.

Salt as Manure.—G. B. Smith, Albany Co., N. Y. Salt is an excellent ingredient in composts, added at the rate of about a peck to the load. It is a good dressing for grass, grain land, and ground where roots are to be grown, and in fact it is seldom without some benefit; yet it is impossible to tell how much or how little will produce the best effect. Sometimes two or three bushels to the acre seems to produce the best results, and sometimes but little effect will be seen from a dozen. You will find an answer to the question about gas lime in the January *Agriculturist*, page 7.

Manure under Shed.—L. Labo, of Pennsylvania, and others. Manure mixed largely with straw and thrown together under cover, without further care, will be in danger of drying out and fire fanging. It should be occasionally forked over, and if not wet enough to continue rotting, water should be thrown on to keep the entire heap always moist. A free addition of muck, or black earth, or sods, or even of common soil, will help to absorb the escaping gasses, and increase the value of the heap materially, unless there be as much straw as can be decomposed by the intermixed droppings of animals. Muck, or black earth, or sods, when composted (mixed) with decaying manure, increase the value of the heap not only by acting as absorbents, but they also add much fertilizing material by the decomposition of their own organic elements.

Hen Manure.—Rygate, Vt. You did not calculate for the strength of the compost made by "drying" hen manure with unleached ashes. Never make such a mixture; ammonia is set free and lost. In this case it was disengaged in the soil and in contact with the seed, and of course killed it. Compost hen manure with soil or muck, throwing it into a heap and working it over two or three times, adding more soil each time, until it is about ⅓ manure, ⅔ soil or muck, and put of this but a handful to the hill of corn. The grass you sent was a variety of *Panicum dichotomum*, one of the "Panic" grasses.

Granite Manure.—"John." Yes, there is such a thing; but it will never drive barn-manure out of use. The *fine* chips or dust of granite quarries, and of the stone-cutters, when strewn over grass-land often produces a marked effect. Granite is composed of felspar, mica, and quartz; and felspar contains about 14 per cent of *potash*. Hence the fertilizing power of the granite.

Muck Swamps which can not be Drained.—M. D. Loper, Long Island. In the Winter cut off all the brush, and in a dry time dig out a place in the lowest part, as deep as you can, for a constant pond, and dig ditches running into it. In this way you will undoubtedly get a good part of your swamp dry enough to dig muck in, even in Winter. If there is a clay bottom to the swamp, and gravel or sand beneath, a boring or well through the clay will tap such a sink, and give drainage.

Grass Land—When to Manure.—Hampden, of Holyoke, Mass., communicates to the *Agriculturist* his experience in manuring grass lands, which we have only room for in a very condensed form: Three years ago, he top-dressed part of a meadow in August; 3 weeks, dry and hot, without rain, followed; he thought all the manure lost. After a few rains, the manured part showed finely and the next Summer the crop of hay was double. The next year, top-dressed a meadow the last of November; saw very little benefit the next season, and this little, perhaps, due to the action of the manure as a mulch or "blanket" rather than as a fertilizer. Last year, manured part of meadow lot in August, the rest in September. The appearances indicate one third larger crop from the August application.

Wire Fence on a Stone Wall.—J. C. Boorse, Montgomery Co., Pa. The manufactured wire netting fence answers a good purpose, fastened to posts set in the ground or in the center of a low stone wall. It can be purchased at most agricultural stores for $1 to $2 per rod, according to the hight, the size of the wire, and the fineness or coarseness of the meshes.

How Much Fall in Drains?—T. Hooper, Kansas. Be sure only that there is a fall. If you are *sure* that a tile drain *falls* 1 inch in 100 feet, and that uniformly, it will do, but it is easier to be sure of 1 foot fall in 100 feet, and 3 to 5 feet are preferable. Stone drains, etc., need a greater fall than tiles, but drains with little fall must be very carefully laid so as not to get out of place or fill up with sand and silt.

Cisterns.—J. M. H., Mt. Vernon, N. Y. You may locate the cistern at almost any distance from the pump by having a tight connecting pipe. The force required depends mainly upon the hight of the pump above the water, though the longer pipe involves more friction from the water. The expense of blasting will probably greatly exceed that of a connecting pipe—you can judge. Roman cement is an English article, so called from its resemblance to the cement found in the old Roman structures of England. Probably none in the world surpasses the Rosendale and Kingston cements. The Croton Acqueduct was laid in these. We can not say which is the best pump.

A Good Cellar.—A. M. Ward, Hartford Co., Conn., thus expresses to the *Agriculturist* his appreciation of a good cellar. "Although living in a hired house, four years ago I had the cellar bottom cemented at my own expense. The walls were rough, destroyed costly brushes in whitewashing, and let in damp, sometimes water, and more especially *rats*, so I kept a tub of mortar on hand in the cellar, with which occasionally of an evening I smoothed off the walls; and then whitewashed. Now it is a pleasant room, with constantly increasing *conveniences*, and is the envy of my *wealthy* neighbors who have nothing in comparison."

Sulphur to Prevent Potato Rot.—It is announced in Austria that carefully conducted experiments prove that sulphur put in the drills with potatoes when planted, has prevented the rot to some extent, and besides, improved the flavor.

Weeds a Remedy for Potato Rot.—A Delaware Farmer says he plants his potatoes as soon as the frost will permit, in Spring, tends them well until they bloom, but never disturbs them after that. Where the crab grass and other weeds cover the ground most effectually there are the fewest rotten potatoes, or rather no rotten ones. The yield is not always as good, but he finds his gain in this practice. He has always found the most rot on naked, dry spots, exposed to the sun. [Weeds or rot—the choice is a hard one.—ED.]

Potatoes—How an Extra crop was Raised.—Turnips.—J. B. F., of Hunterdon Co., N. J., writes to the *Agriculturist* that he had an extra crop of potatoes last year, thus: "Manure was plowed under; the ground then harrowed and struck out with furrows 2½ feet apart. The potatoes were cut 3 eyes to the piece, and the pieces placed 1 foot apart in the drill; ashes were sprinkled on and then a covering of 4 inches of soil. When well up, the plow was run close to the row to throw the dirt away, and then it was thrown back again by running the plow the other way. This loosened the soil and admitted air and warmth. A week after, the cultivator was run between the rows. Just before blossoming the double plowing was repeated. The planting was about April 15; the varieties, Mercers and Buckeyes, which mature before the rot takes place. At the last hoeing turnips were sown between the rows. I have also raised good crops of turnips sown among corn at the last hoeing—the flat and red top varieties grown thus often reaching 4 lbs. weight, and these stored in the cellar with a little dirt over them keep well for cattle until Spring." [Like almost all records of experience sent to us, the above is defective in one or more items; nothing is said of the kind of soil, nor of the kind or quality or amount of manure applied. All such particulars are essential to render one man's experience fully useful to another.—ED.]

Planting Potatoes.—Experiments by S. S. Gregory, Cuyahoga Co., O., reported to the *Agriculturist* indicate that when the seed is cut it will pay well to plant all the pieces flesh-side down. In his experiments a difference of nearly one fifth was obtained.

Keeping Celery in Winter.—J. M., of Lancaster Co., Pa., communicates the following experiment to the *American Agriculturist*: I carefully lifted my celery with as much earth as would adhere to the roots, and set the plants close together in the milk trough in my spring-house, and at once put in and have maintained about 6 inches water in the trough. The celery shows as much vigor of growth now (Jan. 15,) as before transplanting, being much larger now, than when it was dug up, bleached nicely, and the new growth is very fine and crisp, and of course is very conveniently obtained for use. The spring house is built of stone and arched over with brick [and is doubtless dark.]

Heading Cauliflower in the Cellar.—"A Constant Reader," Albany, N. Y., writes to the *Agriculturist* that on the approach of the present Winter he found some thirty cauliflowers that had not matured. These he transplanted into soil in the cellar, putting them near together, with earth around the roots. They were watered occasionally, and every plant matured, producing as fine and large heads as he ever saw. [Not unusual.]

Prolific Pumpkin Vine.—H. A. Terry, of Pottawatomie Co., Iowa, says he raised 42 cheese pumpkins upon a single vine from seed distributed last year by the *Agriculturist*. They averaged 18 lbs. each, making 756 lbs. from the single vine. The main vine and laterals measured 376 feet in length. We call that more than "some pumpkins." The soil must have been very rich naturally, if not artificially.

Transplanting and Pinching Tomatoes.—"Gardener," Lewiston, Me.—Do not shorten the tap root of tomatoes, but pinch back early plants when one foot high, just nipping off the top shoot. Cover early plants during cool nights with flower pots to force them.

Hemlock Hedge.—"O. S." The best way is to get your bushes from a nursery—they will be better plants, and be more likely to live. But if not convenient to do that, then try this method: Having prepared the ground well all along the line of the proposed hedge, when the hemlocks begin to show little green tufts of new leaves on the tips of the boughs, go to the fields, (not to the dark woods,) taking along a sharp spade and some matting to cover the roots. Select small, bushy plants, not more than two feet high, cut a circle around each tree, eighteen inches or more from the stem, and lift the plant, soil and all, into the wagon, covering the exposed roots at once. When the wagon is full, lose no time in getting home and setting out the trees. Mulch them well, and the most, if not all of them will live and prosper.

Evergreens for Cemetery Lots.—G. R. N., Tolland Co., Conn. You will find nothing to answer your purpose better than Arbor vitæ. It will bear trimming to almost any degree or form. Box, though hardy, needs to be protected, or the leaves will turn yellow, and parts of the shrub will become naked or dead.

Peach Trees Laid Down in Winter.—E. R. C., asks: "Can peach trees in the open ground be so dwarfed as to be laid down and covered in Winter?" It may be done, we suppose. The best way is probably to form five straight branches taken as near the ground as possible, and keep them closely pruned and tied down to stakes, so that the outer ends will rise but two or three feet above the ground according to the length. Mr. Camp, of Pennsylvania, has 30 trees laid down this Winter; we have asked for his results after the next fruiting.

Sowing Apple Seeds.—J. H. C., Toledo, directs, in a communication to the *American Agriculturist*, to use seeds washed from unfermented cider pomace. Good seed is bright and plump. Sow in Spring or Fall, half an inch to an inch apart in rows an inch deep, and three and a half feet apart, in good warm land. If sown in Spring they should be mixed with sand and exposed on boards or in boxes to freezing. Keep the land clear of weeds and "cultivate" three or four times in a season. About one third of the plants will be ready to graft at one year old if they do well, and the balance at two years old.

To Propagate the Mulberry.—W. M. S. The Morus multicaulis, and other varieties of the mulberry are propagated by layers and cuttings of single eyes or buds. They root readily in a moderate hot-bed.

Fruit Trees by the Roadsides.—Zechokke somewhere puts words like these, in the mouth of an old mechanic, addressing his son who is on the point of leaving home, in search of work as a journeyman: "If you come into a country where fruit trees are planted along the highways, there *rest*, my son. You are in a country where honest and sensible people live."

Pears—Varieties on a Tree, etc.—Edwin Bloeser, Middletown, Conn. There are no objections to grafting several sorts upon one tree, except that a tree thus bearing several kinds rarely or never exhibits beauty of form. It grows one-sided or otherwise out of shape unless great care is taken to graft one kind on the lower limbs and another in the top—always having in view the size of the pears, the habit of growth, and the tendency of the fruit to fall. Mixing varieties may also make confusion in gathering the fruit.

Good Early Pears.—"J. K."—Madeleine, ripens early in August; Bloodgood, in August; Osband's Summer, do; Dearborn's Seedling, do; Doyenne d'Ete, do; Rostiezer, early September; Tyson, September.

Barren Lemon Trees.—Mrs. Allen, Chautauqua Co., N. Y. Try the effect of getting a few cions or buds of a bearing tree, from some one growing them in a green-house, and bud or graft the barren tree. Budding in June will probably be preferable.

The Austin Strawberry.—An Indiana subscriber sends an advertisement of this berry clipped from the Country Gentleman, and asks if the claims put forth are reliable. They are rather strong. The Austin Strawberry is large, and pretty productive, but not of the best flavor we like. Its greatest merit is that it fruits later than most other varieties, and therefore prolongs the season of this delicious crop. It answers very well, therefore, as one of an assortment in the garden.

Strawberries, Beans.—R. F. C., Mich. The Black Prince strawberry does only tolerably in this country; other varieties surpass it as bearers. The beans taken from the crop of a wild goose are the prairie bean *Phaseolus diversifolius*, common in Canada and the Northwest.

The Green Rose.—"D. S." Not of French origin, as you suppose. Monsieur deserves the credit of originating most of our best roses, but he must not bear off *this* glory. A florist in Baltimore, (his name we do not recall,) first introduced it to the world, about eighteen years ago. An enterprising Philadelphia gardener soon sent it over to England and France, where it produced quite a sensation. The price, at first, was $2 50 a plant. Now, it is as cheap as other good roses. But we advise no one to buy it for its beauty. The flower is only semi-double, and the petals of a dirty pale-green. It is interesting only as a curiosity.

Ten Fine June Roses.—"Alice." You will find the following excellent, though they do not by any means include *all* the first-rate Summer roses: *Aurette*, blackish purple, medium size, globular and double. *Cericette*, bright red, double. *George 4th*, large, purplish crimson, double, but loose, very fine. *Harrison's Yellow*, not fully double, but early and pretty. *Persian Yellow*, fine, golden yellow, double. *Old Cabbage*, needs no description or praise. *Luxembourgh Moss*, bright red and mossy. *Madonna Hardy*, white, nearly double. *Venus*, white, with a delicate pink tinge, double. *La Tourtenelle*, the "dove-colored" rose.

Skeletonizing Plants.—The simplest method is to select firm, perfect leaves of any kind, such as camellia, apple, pear, magnolia, ivy, jessamine; steep the firmer varieties in hot water a few minutes, (this is not necessary with others) and then lay them in cold rain water, and keep them covered by it, for two or three weeks or even more, not changing the water. After this take them out one at a time, and laying them on a plate with a little water, by means of a camels' hair pencil remove the softened pulpy part of the leaf, when nothing but the fibers will be left. These should be perfectly freed from pulp even if another week's soaking be required. Finally, bleach by laying the leaves in a liquid made by putting one tablespoonful of chloride of lime in a quart bottle of water, shake it well, and after it has stood some hours pour off the clear liquid for use.

Non Flowering Wistaria.—Sarah Eldridge, Litchfield Co., Conn. If your Wistaria Sinensis is in an exposed situation, or where the sun starts the buds too early in Spring, lay it down in the Fall, and put it up late in Spring. Dig in a compost about the roots, and if the vine is old and feeble, cut back and train a new shoot.

A Curious Hanging Basket.—Miss E. Slocum, of Fayette Co., Pa., sends the following description to the *American Agriculturist*. Procure a large sized turnip, and scrape out the underside, leaving a pretty thick wall all around; fill the cavity with earth, and plant in it some climbing vine—cypress vine, or morning glory. Suspend the turnip with cords, and in a little time the vines will twine around the strings, and the turnip-sprouting from below, will put forth leaves and stems that will turn upward, and curl gracefully around the base.

Sewing Machines.—Mrs. O. G. N., Dane Co., Wis., inquires about the truth of the statement that in many families sewing machines are laid aside as soon as the novelty wears off, and the needle resorted to. Should we open our columns to testimony of the constant and increasing use of these machines in families where they have been only used, there would be room for nothing else. In our own family we have had them in use for four years and prize them now more than ever. If a woman has no tact or accuracy, or ability to understand simple mechanical contrivances and effects, and is withal disinclined to work of any kind, she will probably neglect her sewing machine after the novelty is worn off.

Milk for Bees.—In some of the Germany journals we see it stated that German Bee-keepers have found sweet fresh milk the best artificial food for bees. This is a new idea to us—not very plausible—and we leave experienced apiarians to condemn or approve.—ED.

Tunneling for a Water Course.—John R. Thompson, Pendleton Co., Ky., asks the cost of making a small tunnel through a limestone rock, 200 yards. He has a stream, with a fifty-foot fall in that case, available to run a mill above the banks of the Licking River. It is to be noted that no man has a right to tap a stream which flows through other men's lands and not return the water to the same stream again. The tunneling will cost under the most favorable circumstances scarcely less than $3 a foot and may cost $10. If the rock be soft and easily worked with the pick and bar, the expense will be least; he may have to use powder for every foot he advances. The tunnel ought to be commenced at each end in order to have good air; a hole 2½ or 3 feet wide, by 5 feet high would be as small as a man could work well. Picks, shovels, sledges, sets of drill borers, iron wedges, crow-bars, and barrows are the

tools needed. The tunnel should be nearly level, to avoid the water wearing, and to have as much fall as possible at the mill. Should the rock be full of cracks and fissures, or should loose ground be encountered it would be necessary to support the sides and top with timber and planks, and the same causes might make it necessary to lay the water course in cement.

Dynamometers.—P. H. Lucas, Crawford Co., Pa. This implement is not usually kept at agricultural implement stores, but is made to order when wanted. The common form was that of a C-shaped spring which the draft opens, and to which a dial and index are attached. The scale was graduated by suspending a platform to the dynamometer and loading it with known weights. Recently elliptic springs have been employed, and are preferred, we believe.

Barometers.—John P. Kast. Hang your Kendall's Aneroid in any convenient room. It will indicate the same in-doors or out, warm or cold, a change of 30 or 40ª of temperature will make scarcely any perceptable difference with it, except for the most scientific observation. Bear in mind that the barometer does not indicate changes of temperature, but gives accurately the *weight* of the air, and from this and from other things, if we know enough, we predict changes.

Best Soil for Plants in Pots.—E. L. Bartholomew, Westfield. We can hardly give a set of arbitrary rules. The best growers make up a general mass and use it for nearly all kinds of plants (excepting heath's and orchids), adding more sand for small rooted plants such as azaleas, lechenaulias, cuneas, etc., and less for the strong-rooted, such as acacias, oleanders, etc. The basis of a general soil is grass sods from old pastures in good condition. These are gathered and piled up with one fourth their bulk of manure—more or less according to their richness—and left a few weeks until they decay so as to crumble easily in the hand. Chopping finely with a spade hastens the decomposition. If leaf-mold (that is black soil of decayed leaves) or peat be at hand they can be mixed with the decayed sods freely. If the sod soil was clayey or compact considerable fine sand should be added to make the whole light and friable. Such a preparation may be made up in large quantity and be kept on hand, always ready for use in pots, and also for covering small seeds sown in drills in the open ground.

Use Earthen Pots for Plants.—Very few yet appreciate the convenience of a few earthen pots of different sizes for starting early plants. They cost but little, and with moderate care will last for years. A few will suffice for the ordinary garden of the farm or village plot. Filled with soil and sown in March with seeds of cabbage, tomatoes, cauliflower, peppers, cucumbers, lettuce, etc., and with various flower seeds if desired, they can be left out on the South or East side of a building except when the air is below the freezing point, in which case they can be temporarily carried into a cellar or warm room. By the time the ground is ready for seed, the pots will afford a supply of good sized plants to set out, and from two to four weeks, or more, will be gained. If the seed be sown in very small pots, or the plants be transplanted into these, a ball of earth can be turned out into the open ground, and the plants receive no check.

The Best Pots for Plants are those made of clear clay. Much sand in the clay glazes them. Small stones or pebbles will crack out on wetting. It is more important to have the inside smooth, than the outside, as the fine root fibers will not attach themselves, and thus prevent the easy removal of the ball of earth in a mass. For a similar reason the bottom should be considerably narrower than the top, and the sides slope uniformly. With pots thus made one can, after a little practice, take out and examine the ball as often as he desires, and yet not disturb the growth. The rim of the top should not project far, or the pots occupy too much space. The hole at the bottom should be well protected with broken crocks, oyster shells, coal cinders, or stone chips, covered with moss, so as to preserve good drainage. These pots are of all sizes, from "thumb pots" holding half a gill up to several gallons. The thumb pots suffice for *starting* single plants—and cost scarcely a dollar a hundred.

Chicory.—C. H. S., Clay Co., Ill., asks, "How shall I cultivate chicory for use, instead of coffee?" Sow early in April, in good warm soil, in rows 16 inches apart. Keep the ground loose and weeded, and thin to 4 to 6 inches apart. The culture is similar to carrots or parsneps. Dig when the plants stop growing.

Gooseberry and Currant Wines.—Dr. A. Noyes, of Bangor, Me., sends us half a dozen bottles of wine, made from gooseberries and currants in 1859. To each quart of juice were added 2 quarts of water and 2 pounds of sugar. The mixture was then put into casks, filling them up. The bung-holes were left open until fermentation had nearly ceased, and then closed, not perfectly tight. The samples received were: 2 from red currants, 2 from white currants, and 2 from gooseberries, All are good; those from gooseberries very agreeable; but all rather spiritous, from the amount of sugar used.

Sassafras Bark a Remedy for Worms in Dried Fruit.—Dried apples, peaches, and other fruit are usually infested with worms, if kept for a long time. S. S. R., sends the *Agriculturist* his plan of keeping them. "Put in common muslin bags with a little sassafras bark scattered through, a handful of bark to a bushel of fruit, and no worms will trouble them, as I have proved by keeping dried apples 2 years in a pantry."

Soiling Sheep.—A., Millmersville, O., inquires if sheep will do well if kept up and fed green hay in the Summer time, instead of being kept at pasture. When sheep are "kept up" in the Summer time, they are commonly fed dry hay and other food, much as in Winter, and they do well. If any of our readers have experience in this matter, we hope to hear from them.

Extraordinary Mutton.—Two Cotswold ewes imported and fattened by S. W. Buffum, Winchester, N. H., raised lambs at 1 and 2 years old, but not since, in 1860, weighed 350 and 356 lbs., respectively—690 in '61, 575 and in '62, at the time of their slaughter by Bryan Lawrence, Centre Market, N.Y., one *reported* 329—dressed **208 lbs.,** the other 321—dressed **215 lbs.** They were 5 years old. Mr. Lawrence sends one of them to President Lincoln, the other to Secretary Seward, in token of his appreciation of their services to the country. They are, so far as we can learn, the heaviest sheep ever killed in this country.

John Sanderson's Ox. "Constitution." We gave in the February *Agriculturist* (page 57), the measurements of this monster grade Short Horn Steer, not knowing that he was then on his way to this City, and to slaughter. He was purchased, exhibited, and finally killed by Bryan Lawrence, Centre Market, in whose hands we examined him before his slaughter, and from whom we obtain the following figures. Live weight 3,300 lbs., (having fallen off considerably since his 150 mile journey). Dressed weight as follows; Quarters, fore, 743 lbs., and 732 lbs.; hind, 496 lbs., and 502 lbs. Total of carcass, **2,473 lbs.** Hide 125 only, and Tallow 147. These figures show, so far as we know, unprecedented excellence. A heavier carcass than was ever before seen in New-York, (or elsewhere in this country we believe), of unexampled fineness; with smaller offal, lighter hide, smaller loss than we have ever known, and in connection with so large an animal. The beef or proceeds of its sale are to be distributed among the poor of the City.

Smoke Stains on Marble.—Some one at Prince's Bay, who signs himself "Anti S. of Essex," in referring to the item on page 38 of February *Agriculturist*, writes: "Make a solution of chloride of lime in water, mix plaster of Paris with it to the consistence of paste, and apply to smoke stained marble. It will remove stains with no injury to the polish of the marble."

Feeding Value of Chess and Cockle Seed, and Corn Cobs.—Isaac Bachtel, of Stark Co., Ohio, states that many farmers use the screenings of their grain, and asks for the per cent. of nutrition in chess, cockle, and corn cobs.—No chemical investigation has yet been done. Of chess and cockle we can only estimate that could now be made must be derived from the results of their use, and no one ought to grow enough of these pests to make it worth while to inquire into the subject. Corn cobs vary greatly in value according to the ripeness of the corn when cut. The analysis hitherto afforded is not much at any time, though as a divisor of meal, or to "fill up," we incline to the opinion that it is well to grind the cobs with the corn for working animals. They are probably as good as their weight of fine chopped dry straw.

The Largest Pumpkin—A Gourd Exhibition.—There has been on exhibition for three months past, at the office of the *American Agriculturist*, the largest pumpkin we have ever seen, and perhaps the largest one raised in this country. It measures 7 feet 2 inches in circumference, and weighed at first 204 pounds. It was grown by Mr. Geo. Barclay, of New-Hamburg, Dutchess Co., N. Y. Decay appears to be setting in, and it will need to be removed soon. The largest pumpkin we have seen noticed in Europe, was one of 262½ lbs., and more than 10½ feet in circumference, raised at Orleans, France; and one of 220 lbs., and 8½ feet round, grown at Paris last year. In England, pumpkins and gourds are classed together as gourds, but divided into "ornamental," "eatable." There is to be a grand Gourd Exhibition, including the two classes, by the Royal Horticultural Society of London, next October, when there will doubtless be some big things shown, both from Great Britain and the Continent. We fear the show will be too early for the exhibition of fully matured specimens from this country. Perhaps we may be able to compete if plants are started early, in hot-beds or green-houses. We may add, in this connection, that some Belgian growers are preparing to ensure the growth of pumpkins by feeding the plants with milk and water—the fluid to be supplied by a rag leading from a vessel, and inserted into the peduncle (fruit stem) of the plant. At least so it is reported. We suspect, however, that the report arose from the practice of hanging a rag from a vessel of this nature water, so that it should constantly drop down upon the soil near the roots of the vine.

The N. Y. State Agr.'l Society, held its Annual Meeting in the Assembly Chamber, at Albany, on February 12th. The Treasurer's Report showed expenditures amounting to $18,179 and a balance of $42 on hand. The following officers were elected for the year: *President*, EZRA CORNELL, of Tompkins Co.; 8 *Vice Presidents*, viz.: Thomas H. Faile, of New-York; Samuel Thorne, of Dutchess; Herman Wendell, of Albany; Oscar Granger, of Saratoga; Solon D. Hungerford, of Jefferson; Thomas I. Chatfield, of Tioga; Patrick Barry, of Monroe; Samuel W. Johnson, of Cattaraugus; *Cor. Sec.*, Benjamin P. Johnson, of Albany; *Rec. Sec.*, Erastus Corning, Jr., of Albany; *Treasurer*, Luther H. Tucker, of Albany; *Executive Committee*, T. C. Peters, of Genesee; E. Sherrill, of Ontario; A. Hubbell, of Oneida; C. I. Hayes, of Otsego; W. Newcomb, of Rensselaer. Dr. Fitch was ill and prevented from presenting his report on Insects, but a letter was read from him on the Entomological results of the past year, and Mr. H. S. Randall read a valuable paper on fine wool sheep in this Country.

"Association of Breeders of Thoroughbred neat Stock."—This Society was formed to enable breeders to gain a fuller and truer knowledge of the stock of the country claiming to be thorough-bred, of *all* the recognized breeds, and to promote the improvement of the same. The pedigrees of the animals of the members are recorded after thorough investigation, and it is supposed that none but flawless pedigrees can be found upon the books of the Society. The records of Ayrshire cattle are so full that we presume the Society will at once commence an Ayrshire herd-book; and as the publication of the Devon herd-book has been so losing a business that Mr. Howard proposes to discontinue it, this Association will very greatly favor the public by continuing this publication. See advertisement of Annual meeting.

Transactions of Agricultural and Horticultural Societies for 1862.—We acknowledge the receipt of the 45d Annual Report and Transactions of the Hampshire, Franklin, and Hampden Agricultural Society of Mass., from the President, T. G. Huntington, Esq.——Of the 9th Annual Report, Transactions of the Worcester North Agricultural Society, of Mass.——Of the Transactions of the Jefferson County Agricultural Society, of N. Y.——Of the Transactions of the Mass. Horticultural Society, from Eben Wright, Corresponding Secretary.

Geological Survey of Michigan.—We are glad to learn from a copy of the First Biennial Report of the State Geologist, Prof. Winchell, that this survey is in progress; but the appropriations are too limited for the importance of the subject. A hundred thousand dollars expended in this work during the next three years, would be the best possible investment that could be made towards developing the resources of the State, and the money would come back almost every year if not offence. If the mass of the people fully understood the object and advantages of a thorough examination of the *soils*, minerals, salt springs, coals, fertilizers, etc., one, or two, or three hundred thousand dollars would be cheerfully set apart for the work. We are happy to be able to assure them that under the supervision of Prof. Winchell, the work will be well done. We speak from personal knowledge of his ability, and integrity.

Farmers' Clubs and Sewing Societies.—"Charley Clover," of Elizabeth, N. J., writes of the success, patriotically, practically and socially, of the meetings of ladies to aid the Sanitary Commission, which meetings were attended by the gentlemen in the evening. The institution has promoted the Union cause in so many ways, and is regarded with so much favor, that we suggest the formal publication of the *basis of union* between the Farmers' Club and the Sewing Society.

An Important Enterprise—The Co-operation of all our Readers Asked.

The project detailed below is one of general interest, not only to each of our readers, but to the whole country, and we ask special attention to the subject. It is well known that in this country we have no public system of gathering from year to year, and at different times in the year, *the statistics* of the *condition and probable yield of our growing crops*. This work should be done by the General Government, but at present it is not, nor is it likely to be for a year or two at least. When, for example, the wheat harvest approaches, there is the utmost uncertainty, not only as to the relative *amount* sown, but also in regard to the *condition* of the growing crop. Shrewd speculators, who have on hand a large stock of old grain, often circulate newspaper reports to the effect that owing to bad weather, insects, small breadth, etc., there will not be half a crop gathered. On the other hand, as the harvest begins, another class intending to become grain buyers, are interested in magnifying the yield for the purpose of depressing prices. Thus, not only the producers, but many dealers themselves, are in a state of doubt and uncertainty. Some farmers, influenced by one class of reports, hasten to sell their grain at any price they can first get. Others, seeing more of the other kind of reports, hold on tenaciously, hoping that, owing to the reported poor yield, they will realize higher prices than their neighbors. In short, there is such an entire absence of reliable statistics that all are in a state of doubt and uncertainty, and none more so than the non-commercial producers. This state of things we propose to try to remedy, to a small degree at least, if we can secure the aid and co-operation of our readers, in the following manner:

1. Let the readers of the *Agriculturist* in every town counsel together, and select some man who may be relied upon for good judgment, and general ability to estimate with some degree of accuracy in regard to the leading crops, wheat, corn, etc., (*a*), what is the amount of surface sown or planted, as compared with previous years; and (*b*), the *prospect* at any date. Wherever there is a Farmers' Club, let the Club choose the reporter. Let it be understood by him that he is desired to keep on the look-out, and be able to respond to all questions as to the prospect of the crops. Where any subscriber stands alone, and can get no one to cooperate with him, let him volunteer to act himself, and the very fact that his report is to go out to the country will lead him to be observant and make inquiries.

2. Let the name of such persons be forwarded to the Editor of the *Agriculturist* without delay.

3. To every such person we will send out a sheet of *blank forms*, to be filled up with a brief summary of the amount and condition of the leading crops of the different kinds. The blanks will be so arranged as to require very little writing in filling up, and therefore involve but little labor aside from that required to be well informed as to the condition of the crops.

4. One of these blanks to be filled up at given dates, say May 10, June 10, July 10, and August 10, and forwarded to this Office.

5. These reports will be published in tabular form in the *Agriculturist*, either in full or in a well digested summary.

It will be seen at a glance, that such a system of reports will be of immense value, not only to the country at large, but to every man who has produce to sell. Suppose that only five hundred or one thousand such reports should be gathered and published; yet, if they come from different parts of the country, it is evident that they will give at least an approximation to the average of the whole country. The reports should embrace a neighborhood, and not merely the reporter's own crops, for their condition may depend upon his own good or bad husbandry.

Such is the plan we propose. It will involve much labor and expense on our part, but we shall cheerfully undertake it, if our readers will so far co-operate as to present us with the names of reliable men upon whom we can call for the desired information.

Please act upon it at once. We desire *only one name at a Post-office*. When there are several subscribers at any office, and this is generally the case, let those who first happen to meet, talk the subject over, and in conjunction with others, select the man, and then some one send us his name and address. When there is but one subscriber, let him talk over the matter with his neighbors who are not subscribers, and among them agree upon some one to act as reporter. It is not at all essential that the reporter be a subscriber. What we desire is, the best man to fill up the blanks and return them to us. On receiving his name, we will enter it among those to whom blanks will be forwarded, with instructions how to make up the report. Since "what is everybody's business is nobody's business," will the reader of this please make this matter one of his own affairs to be first looked after. It needs no argument to show that such a system of reports will be valuable to every farmer, and that, since every other interest depends mainly upon the prosperity of agriculture, (as we clearly demonstrated last year,) all classes will be interested in getting the earliest and most reliable reports of the general condition of the incoming crops of the country.

Farmers' Prospects—What of the Future?

Could we spare the room, it would be pleasant to publish extracts from numerous letters which speak in strong terms of the articles on the market prospects, published in the *American Agriculturist* during the past eight or ten months. These statements voluntarily made, indicate that this journal has saved to its readers, in a single year, vastly more than it has cost the country during the whole twenty years of its existence. Multitudes speak of having realized ten to thirty cents per bushel more for their grain, than they would have received, had they not been induced to withhold their produce from market at a time when prices were at the lowest ebb, and when men's minds were filled with fearful forebodings. So much for the past. The object of many of the letters referred to is, to draw out some definite prognostication from us for the coming year. But here we find ourselves very much in the dark, for the time being. We will, however, offer some general suggestions:

1st. The deficiency in Europe is not yet supplied, and will not be fully met for months to come. In short, if every bushel of wheat that can possibly be spared throughout our country, be gathered up and sent to the seabord before the first of next June, England and France will take it all, and ask for more. The foreign stock of breadstuffs is rapidly decreasing, and we look for very large orders as soon as they can be filled on the opening of inland navigation.

2d. The present indications are, that *after* the next harvest the foreign demand upon us will be very small, if it do not entirely cease for a time. Last Autumn the season for sowing winter grain was very fine, both in Great Britain and on the Continent, and especially in the former, and the breadth sown was greatly above the average. Up to the date of our latest foreign reports, the winter weather had, on the whole, been favorable. Unless, therefore, the spring weather should chance to turn out very badly, so much so as to injure the winter grain, and interfere with the sowing of spring wheat and other spring grains, we can not look for much foreign help in our grain markets *after* June.

3d. In this country it is yet too soon to hazard even a "guess," as some of our readers ask us to do. The breadth sown last Autumn was not much, if any, above the average. It was generally got into the ground in good condition, however. Thus far the Winter has not been the most favorable. There has been too little snow to protect wheat well, and it has still to run the gauntlet of the warm days and freezing nights of March and early April. Wheat will stand the most intense steady frost far better than the expansions and contractions of the wet soil produced by cold nights and warm days. The weather from May 1 to harvest, insects, and dry weather at the time of gathering, may make half difference in the yield. All these circumstances taken into account, we shall hardly look for more than an average crop at best. And moreover, the fact that we had so large a yield in 1861, is rather against a similar yield in 1862, judging from the ordinary course of Nature.

3d. To counterbalance, in part, the expected cessation of a foreign demand, we shall have the fact that the country will be entirely drained of old stocks of grain—probably more so than at any harvest for several years past. This, of itself, will have a favorable effect upon prices, and should the yield turn out below an average, prices will be likely to rule high. One practical conclusion to be drawn from the above statement is, that farmers should prepare to sow a large breadth of Spring wheat.

4th. Much will depend upon the course of the war, and the financial policy adopted by Congress. We look for the termination of the war within a very brief period. It may extend into the Summer, and perhaps into Autumn, but this is scarcely probable. The restoration of peace will be likely to be followed by a sudden spring in all business operations, activity in manufactures, and high prices for all kinds of farm produce. A collapse will, perhaps, or probably, follow, and it behooves farmers, at least, "to make hay while the sun shines." If the country be flooded with a large amount of Treasury Notes, the price of everything will go up in proportion to the relative amount of circulating medium. It will be a good time for farmers to pay off their debts, and to avoid contracting new ones to be paid at a less favorable period. The most practical advice we can now give to farmers is, to prepare for the largest possible Spring planting and sowing; to save and use all the manure that can by any means be made available, and be ready for whatever may come. Do not be carried away by speculation, however high the current may run. Continue to practice the lessons of economy learned during the past dark period. Get the land and store debts paid off. Be content with present possessions, and not run into debt for more acres. Look into and develop the farm lying *under* that you now cultivate, which is already yours in fee simple.

TO THE MARKET.... From a Painting by F. Simon.

(Engraved for the American Agriculturist.)

The above spirited engraving we introduce for the pleasure of those that love to study agricultural scenes sketched by the first artists—and who does not? It suggests, also, a topic often dwelt upon in these columns, viz: the want of judgment exercised by very many farmers in selling off their *best* calves to the butcher. In our review of the N. Y. Live Stock Trade for 1861, given on page 58 of the February *Agriculturist*, it was stated that during last year there were sold in this city at the regular market yards, over *thirty three thousand* (33,388) veal calves, at an average price of $5.10 each. Probably seven or eight thousand more were sold direct to butchers, from boats and barges, and from wagons—in all over forty thousand. We stop not to discuss here whether it would or would not have been more profitable to have raised all these calves. The value of milk in and near New-York would probably decide the question in the negative. The point we would here make is this: A considerable number of these calves were "bobs," or "kittens" as they are called in market parlance, that is, calves two to six days old, which sold to some of the lowest class butchers at $1 to $1.50 each—sometimes $2. Taking out these, the average would range near $6 a head. Now, very many of these calves were large noble animals, that sold for $8 to $10 each, and these are just the class that find the most ready sale, and, we are sorry to say it, the class that farmers are most ready to part with, because they can get two or three dollars more a head for them. But it costs scarcely any more to raise to three years of age one of the best calves, than one of the poorer ones—indeed it often costs less. Yet at three years old the one animal will be worth ten to twenty dollars more than the other. It needs no figuring, no further argument, to indicate lack of economy in the present system. It is on a par with the following: Two brothers each received 80 sheep from the same paternal flock. One sold 20 of his sheep to pay for a Southdown buck. From the 45 ewes left he raised 52 lambs, worth the next Autumn $4.25 each—$221. The other bred his whole flock to a common buck. He raised 65 lambs, worth the next Autumn hardly $3 each—$195, from which deduct $19 for keeping the extra 19 sheep, leaving $176 against $221.

Goats on Farms—Mr. Greeley's Experience.

Friend Judd.—H. G. T., in the December *Agriculturist*, wonders what can be urged against the keeping of goats. I answer—not much, if you are living on the stony hills of Palestine, or the desert of Sahara, or the Plains of Colorado, or the parched, desolate valleys of Utah, where a tree is unknown and its production is barely a possibility. In fact, I think the goat destined to prove a great blessing to all that vast region lying westward of the banks of the Platte, and eastward of the Sierra Nevada. In a shadeblest, fruitful country like this, however, the goat is a nuisance and a terror. The utmost vigilance will not prevent the destruction of your rarest fruit and shade-trees, if you keep Billy and Nanny on your premises. I speak feelingly on the subject, for my experience has been a sore one. My last trial with a she-goat (bought for her milk for an infant,) and three young ones—all fine animals, but for their invincible propensity to eat any thing that should not be eaten. I am not certain that either of them would have barked a crowbar unless very hungry; but I would not like to insure the dry, cork-like rind of the big trees of California, (from a foot to eighteen inches through,) against the teeth of any goat I ever harbored. If you must have goats, keep them, for their milk is the best food that can be had for young children; but tie them fast in some lot where nothing grows that you want to survive, or shut them up in a barn, and be sure they never have a chance of liberty. A goat at large on a Yankee farm would do more damage in a single week than can be repaired in ten years. H. Greeley.

A Talk about "Pedigrees."

"*Like produces like*" is the adage of the stock breeders; but it has some very important exceptions. Thus, for example, animals sprung from parents of different breeds, (or of no breed at all,) produce offspring unlike themselves and of no uniform type, unless they be paired with animals of some breed having *fixed* characteristics, when these fixed characteristics will generally be prominent in their offspring. A fixed or established breed is one of which the animals for many generations have exhibited the same general peculiarities, transmitting them to their progeny. The more uniformly these or any desirable peculiarities appear in any line, the more likely are they to reappear in coming generations; so certain is this, that breeders count with absolute confidence upon the value of the off-

spring of animals concerning whose ancestry they have full knowledge. This gives value to those *records* of the sires and dams of animals, running back several or many generations, which are called PEDIGREES. The facts above stated account for the great value attached to horses and neat cattle for breeding purposes which in addition to symmetry and beauty of form have excellent pedigrees. Whoever breeds from such stock feels sure that the progeny will, according to certain laws, be like the parents.

The influences of climate, food, treatment, and the purposes for which animals are raised and employed, all affect more or less uniform changes in the animals of any country where these influences have prevailed. The result is, that in each of the old countries where there has been but little change or importation of animals, the neat cattle, for instance, possess definite characters which mark them as distinct races. The same is true of sheep and swine in a marked degree, and of horses also very much in the same way, except that as horses have so much wider range than other cattle, the different races are separated more distantly, or by barriers hard to pass. So we find in Arabia, where horses are used under the saddle and valued and bred for speed alone, a race of fleet running horses. In New-England, on the contrary, saddle horses have gone very much out of use. The gait sought is the trot, and fleetness is also highly prized. We find there a class of horses bred for those ends, now becoming possessed of distinct traits and likely soon to be recognized as a definite breed, distinguished primarily for fleetness in the trot. The cows of Ayr have been bred for milk. Those of Jersey for cream. The Teeswater and Durham cattle (from which sprung the improved Short Horns) for beef. The same holds true of other kinds of animals.

Individual characteristics as well as those of the race, are communicated to the offspring, but the former less surely. When certain peculiarities are transmitted for several generations they become grafted upon the race, or rather upon the particular family in which they occur. When there are valuable traits or qualities, the value of the animals possessing them is increased. And an animal has still greater value if it can be *proved* that he draws his blood through a long line of such ancestry, because it is then certain that he has the power to impress the same characteristics upon his progeny. This, then, is the reason that pedigrees are so important, and that so much pains are taken to have them recorded in herd-books, turf registers, etc., and also to be sure that they are *true*. To give value to an animal its *pedigree* must be true, and show no mixing of the blood of different breeds, or of ill-matched families of the same breed, and exhibit a *line of ancestry* distinguished for the qualities which it is desired to have in the offspring.

Making Poultry Profitable—The Items.

In the February *Agriculturist* (article "Poultry and Pork,") may be found the results reported by Mr. J. C. Thompson of Staten Island. How he accomplishes these results he states as follows:

THE HEN-HOUSE.—Mine is a lean-to—10x16 feet—10 feet high on the rear and 8 feet front, facing the South. A barn stands on the East end; a shed on the West end, with a glass front, for a shelter and feeding place in cold and wet weather. The roofs of both project three or four feet, which keeps the ground dry in front and about the entrance. The back and front of the house are lined, or double boarded, and the front has three glazed sashes—furnished with inside shutters—a ventilator 16 inches square is placed in the roof, with a valve hung at the bottom, to close, more or less, as may be required, in cold and stormy weather.

ROOSTS.—A frame is made and hung to the rear of the house, which can be set at any desired inclination; the roosts are placed lengthwise on the frame, ladder-like, about 18 inches apart. As all fowls seek the highest roosts, these are filled first, and others in succession. This brings them close together in cold weather. In warm weather the frame must be leveled to make them scatter on all the roosts, and keep cool as possible. The floor being concreted, it is easy to clean, keeps out rats, and makes it dry. Under the roosts I place fine charcoal (a poor plan to use charcoal—ED.) or dry earth, or muck, to absorb the droppings; a few shovelfuls added each day keeps the house free from any bad odor. The rest of the floor should be covered with saw-dust, dry earth, chaff, or cut straw, for, in cold weather, hens like to keep their feet dry and warm. Neither *coal* nor *wood ashes* should be put in the house, as they act on the manure, and decompose the uric acid, thus wasting ammonia, and making the house offensive.

FOR NESTS—Use butter or lard tubs (which can be had at the grocer's for 6 cents each) set on shelves at the ends of the house, one to two feet from the floor—portable nests (with glass nest eggs) are best. They should be often cleaned and supplied with fresh straw or hay. The grease on the tubs is a remedy against lice. [A good idea.—ED.] Greasing the roosts at all the places where they touch the frame, and in fact, the inside of the house and roosts, with any kind of soft grease or fish oil, is certain to destroy them, as they cannot live a moment in grease. A paint brush or white-wash brush can be used for applying the grease, which should be done early in the Spring, and again in Summer, if it appears to be required.

MODE OF FEEDING.—I give only sound grain; no other should be used. A variety is not objectionable. My standing dish is wheat screenings; this is always by them, in a box slatted up at the sides for the purpose, as a feeding box. In Winter scalded corn meal or ground corn and oats is given to them warm in the morning; but the main food must be hard grains. They must be well supplied with finely cracked oyster shells, gravel and mortar, and green food in Winter. Mine consume two or three heads of cabbage daily. They get the scraps from the table, scrap meat, etc. In Summer, grass, lettuce and cabbage are furnished daily in abundance—they will consume a great quantity.

YARD ROOM.—The permanent yard is 50x50, opening into a grazing and rambling lot of 50x100, also used as a plum orchard. The fence is only 5 feet high, and by feeding well and clipping the feathers on one wing, there is no trouble in keeping them at all times within the yard.

SETTING THE HENS.—To insure good healthy chicks, the hens should be set in March, and certainly not later than April. By having portable nests, when hens desire to set, and become fixed in the habit, in the setting season, they can be supplied with eggs, (the date of setting marked on them in ink or pencil,) and any number of nests moved to a room for the purpose, which must be kept closed, and well supplied with food and water. The nests may all be set side by side, for if the hens should all leave their nests at once, to feed, when they return they will each take a nest, although they may change places. This arrangement insures their setting steady, as they are not compelled to wander off for food, but return quickly to the nest, and keep up the warmth of the eggs, and thus bring out strong chicks. By setting a number at one time, if some hatch half broods, they can be put together with one hen. When a setting hen looks pale about the head, it is evidence she is lousy; clean and wash the nest, grease the hen under the wings, on the back and rump, wash the eggs in warm water, and return to the nest. [Better transfer to a new, clean nest.—ED.]

TREATMENT OF CHICKS.—When first hatched, they must be fed on bread soaked in milk; after three or four days, feed with cooked or scalded Indian meal, three times a day; but finely cracked corn, or wheat screenings, should be always within their reach; also clean water. The hens with chicks should be kept in coops for several days, the coops kept dry and clean, and placed in sheltered places. With such treatment not five per cent. of chicks will be lost. In conclusion let me say, the secret of success with fowls is this. They must be *young, well fed*, and *cared* for, and small numbers, 15 to 25, pay much better in proportion than large flocks.

J. C. T.

What does it Cost to Keep a Horse?

We would be pleased to receive for the *Agriculturist* some brief accurate statements, going to show the average cost of keeping a horse for a year in different parts of the country. As the market value of grain and hay varies greatly, it will be best to give the average amount of each kind of food consumed by two or more horses. As a guide we present the following items from an English Farmer's Note Book. The table gives the yearly *average* for 6 horses, during a period of 8 years.

Average Yearly Expense of each Horse.

64⅝ bushels of Oats, @ 62½c	$40.31
1 tun of Hay in Spring	15.00
2 tuns of Straw and Chaff, fed in Winter	10.50
9 weeks Pasturage in June and July	9.00
Harness and Shoeing	5.25
Average yearly loss by age and death	22.21
Annual Cost per horse	$105.97

This is estimating at English prices for food. The horses were valued at $110 each. During the 8 years 11 horses were lost by various diseases and accidents, making a total loss of $1,210, or $151.25 per year, or $25.21 on each horse. As 11 new horses were purchased during the 8 years, it is probable that the stock was as good at the end as at the beginning of the period; but about $8 should be allowed for the annual interest on the value of each horse. Each horse averaged 258 days of farm work in the year. Merely for example, let us make out two similar tables for this country, taking the same amount of food, but substitute one tun of hay for the two tuns of straw and chaff, and allow four months pasturage.

Yearly Cost of a Horse in more expensive Localities.

64 bushels of Oats, @ 40c	$25.60
2 tuns of Hay, @ $14	28.00
17 weeks Pasturage, @ 50c.	8.50
Harness and Shoeing	5.00
Annual Loss per horse	22.00
Interest on Value	6.00
Total Cost for a year, say	$100.00

Yearly Cost of a Horse in less expensive Localities.

64 bushels of Oats @ 20c	$12.80
2 tuns Hay, @ $8	16.00
17 weeks Pasturage, @ 25c.	4.25
Harness and Shoeing	5.00
Annual Loss	20.00
Interest on value at say $100	7.00
Total Cost for a year, say	$65.00

As above hinted, these tables are not given as accurate, but merely as a form for the guidance of such as may be disposed to furnish more definite information from their experience.

Farmers Wide Awake.

There are all sorts of farmers in the world, and they, accordingly, meet with all sorts of success. There are intelligent, enterprizing, industrious, economical men; and over against these are ignorant, shiftless, wasteful men, who are seldom prosperous. If the lack of activity and thorough business habits which prevails in many of our farming districts, were suddenly transferred to our large cities, and made to pervade our bankers, merchants, publishers and tradesmen, what a shock it would give to the wheel of commerce! Many a door would soon be closed by the sheriff, and grass would grow in our streets. Manufactures and trading generally are conducted with carefulness and economy, with constant attention to details, watching against losses, seizing upon all possible advantages, and with an industry that never tires. This and this alone is the royal road to success.

Now, agriculture, to be prosperous, must be conducted in the same way. The farmer must be a shrewd, thinking man, one who knows at least something of the theory and much more of the practice of his calling; knows how to bring his lands into the best possible condition and to keep them so; knows how to take advantage of the market; how to get the best returns from a given amount of money and labor; knows how to economize, and how, at times and as wisely, to make large expenditures, (say, in draining, manuring, etc.,) when they are demanded. For, in farming, as well as in acts of general benevolence, "there is that giveth and yet increaseth; and there is that withholdeth more than is meet, and it tendeth to poverty."

It is the importance of sagacity, prudent forethought, and management, of skill and enterprize that we wish now to inculcate. More muscular labor, however severe and unremitted, is not enough; book learning is not enough, if disjoined from industry, tact and economy. There is an ideal in every farmer's life, towards which he should always be striving to approach. He should aim to be a man of general intelligence. Aside from the topics of reading and study common to every well-informed man, it becomes him (and it pays) to be familiar as far as possible with practical chemistry, meteorology, geology, mineralogy, botany, animal and vegetable physiology and mechanics. Surely, there is no need of mental inactivity here. Nor should he be merely a man of books and 'ologies. He ought to be a practical, sound-minded, industrious, common sense man, as familiar with all practical details as with theories. There are already many such farmers: we only wish there were more. And ere long, there will be.

How a Woman's Perseverance secured a Fine Homestead.

To the *American Agriculturist*, from one of our German subscribers in Tipton County, Ind., and is but an imperfect picture of what has occurred, and is still occurring, in many western localities:

"About twenty years ago a young couple came here, and bought 160 acres. Though the price was low, the purchase money nearly exhausted their means. They began with hard labor to build themselves a future homestead, and through all the hardships of their undertaking, the young wife was at the side of her husband, and even shared his out-door toils. One day, when they were both trying to fell one of the big oak trees, the man, exhausted and discouraged, said: "I think we had better give up, and try some other business, we will never succeed in this." Thus saying, he put down his ax. But the woman was not so easily disheartened. "Oh! cut away!" she said, "we will conquer these trees by and by, and we *will* have a nice farm before long." These words gave new strength to the man's arm, he commenced to work again. Now, in 1861, they have a beautiful farm of 200 acres. They are 'well off,' as people say. At the county fair the woman received premiums for her fine apples and grapes. The daughter had good needlework there, and the father exhibited excellent horses there, and the father exhibited excellent horses and mules. He has a thousand bushels of corn in his crib. He reads the *Agriculturist*, and procures good books for his wife and children to study. The husband often relates the story to a circle of friends, and says that he would not have had this farm and independent homestead, but for the perseverance and encouragement of his wife on that day."

Washes for Trees.

Complaints are made, here and there, that certain washes for the bark of trees do more harm than good. One, whose apple trees were mossy and hide bound, and infested with insects, used lime-wash; another used soap; another tar; another, a solution of potash; but in nearly every case, with unsatisfactory results. The caustic lime kills the parasitic plants and the vermin which infest the bark; but while a good part of it soon washes off, what remains becomes converted into carbonate of lime, which fills the pores of the inner bark, and prevents its healthy expansion and growth. Common soap suds is less hurtful than the solutions of caustic potash or the tar.——The safest and best wash known to us, is simply a solution of common salsoda, (often called bleacher's No. 1 soda,) dissolved in rain water, at the rate of one pound of soda to a gallon of water, and applied in Spring and Fall. It will not hurt the tree, but will destroy mosses and other fungi; and no eggs or cocoons of vermin can stand before it. It will work off the dead bark, and leave a clean and healthy surface. But to ensure the highest success from this application, the soil about the roots of the trees should be drained if it is wet, and be manured if it is barren.

To Exterminate Pea-Bugs.

"What shall I do to rid my peas of bugs?" exclaim both gardeners and farmers. And we will attempt a reply. The pea-weevil, a small, brown bug or fly, appears early in the Spring, at the time the first crops of peas are forming their pods. He stings the tender pod, right against the nascent pea, and deposits an egg. Sometimes he punctures every pea. A grub is soon hatched, which eats his way into the heart of the pea. Here he grows apace, and by the time the pea is ripe he is full grown, about an eighth of an inch long. He is now a white grub, and has eaten out nearly one half of the pea. His next step is to pass into the pupa state, where he remains until the last of autumn, when he becomes a black beetle, and is prepared, on the opening of Spring, to attack young peas and to reproduce his kind. This being the natural history of the insect, we may judge when and how to attack him. The black-bird, crow and oriole are his born enemies, but they do little towards exterminating him. Of the several methods employed successfully, here is one: Make as many wooden boxes as you have varieties of seed, and fit them with tight covers. After gathering, sorting and drying the seeds, put three or four bits of camphor, the size of a pea, into each box, shake well together and put away. The bugs will be disgusted. Another way is, to scald the seed for about half a minute in boiling water, just before planting. This will, at least, destroy the grubs in the seed. If peas are buggy, we usually take our seed, a peck at a time, and just before sowing, pour in boiling water enough to cover them; then stir until cool, and sow. The scalding has never appeared to injure the germs, while it utterly destroys the bugs, and hastens the sprouting. If too large a mass of peas be taken together, or if rapid stirring be omitted, they might be injured by the heat.

Another is this: Gather the peas as soon as ripe, dry them for two days in the sun. Then put, about a pint at a time, in a colander, cover with a pan, set them over a vessel of boiling water, keeping them there until the steam has penetrated the whole mass of seed. Then spread them out to dry, and put away in boxes or papers. This will kill the pupa, while it will not injure the germ of the seed.

Peas sown as late as the middle of June, are seldom infested with the weevil, because its period for depositing eggs is then past. It is a common and good practice to sow peas for the next year's seed very late in the season.

Birds and Insects—Striking Figures

Prof. Treadwell of Cambridge, in a recent communication to the Boston Natural History Society, relates the following gastronomic feats of the Robin redbreast. "By experiment it appears, that though the bird's food was increased on the 11th day to 40 worms, weighing 20 pennyweights (1 ounce), the weight fell off; and it was not until the fourteenth day, when he ate sixty eight worms, or 34 pennyweights, that he began to increase. On this day the weight of the bird was twenty four dwts.; he therefore ate forty one per cent more than his own weight, in 12 hours. He weighed after it 29 pennyweights, or 15 per cent less than the entire food he had eaten in 12 hours. The length of these worms, if laid end to end, would be about fourteen feet, or ten times the length of the intestines. To meet the objection that the earth worm contains but a small amount of solid nutriment, on the twenty seventh day he was fed exclusively on beef, in quantity 23 pennyweights; at night the bird weighed 42 pennyweights, or but little more than twice the amount of food consumed during the day—not taking into account the earth and water swallowed. This presents a wonderful contrast with the amount of food required by the cold-blooded vertebrates—fishes and reptiles, many of which can live for months without food. It contrasts also with that required by mammalia. A man, eating at the same rate, would require about seventy pounds of flesh a day, and drink five or six gallons of water."

We think few were prepared to believe such facts in regard to the robin, whatever may have been their impressions of the usefulness of this bird. A pair of these birds in a garden, with the average of four young ones, would eat two hundred and fifty worms, or their equivalent in other insects, daily! Of canker worms and caterpillars when they first come out, this would amount to several thousands daily. It would not take a great many birds to keep a garden clean at this rate. We have heard of men who

boasted that they could whip their weight of wild-cats. The robin not only whips his weight of savages every day, but destroys them and converts them into excellent guano.

There can be no doubt that Providence intended birds as a police to keep the insects in check, and if we will keep the cats and boys under, and give the birds a fair chance, we may again have plenty of fruit and grain.

Celery as a Field Crop.

A New-Jersey market gardener communicates to the Gardener's Monthly the following method of growing celery, which he represents as being easy as raising a crop of cabbages:

"The ground necessary for the growth of celery need not be damp, as is generally supposed. Any good, rich vegetable soil, if level, is sufficient. Although the plant luxuriates in moisture, if properly applied, yet it is as quickly impatient of stagnant water at the roots as almost any other vegetable. One of the best varieties for private culture is the Incomparable Dwarf, a solid, white variety, never attaining more than two feet in length, but of the most delicious flavor. This variety is particularly well adapted to this simple mode of cultivation, which consists in planting the plants on the surface, one foot apart *each way*, so as to form a square bed. The object in having the plot thus square or oblong is, that when the celery is so planted in a mass, the plants crowd each other when full-grown, so that in the struggle for light, the hearts are drawn upwards—one of the most important objects to be attained; which, when the celery is planted in single or double rows, can not be attained, without the processes of what we call "handling" and "hoeing up." The time of planting is usually the month of July; but if good strong plants can be had, fine celery may be grown by planting in August. Nothing further whatever is necessary in its cultivation but simply hoeing to encourage growth and keep down weeds, as is done in a cabbage or onion bed. This, then, is the whole process from the time of planting in July until November. Thus far, it is, of course, green, unblanched; the blanching process being done when stored in winter quarters.

The time of digging up of course varies somewhat in different localities. In this district we usually have all put away by the middle of November; and after ten years' experience, we find no plan so simple or so safe as the trench system for blanching or preservation.

The process consists in digging a trench or drain ten or twelve inches wide, and of the depth of the length of the celery. The celery is then packed *perpendicularly* in the trench, moderately tight, until the whole is filled up. It will be understood that there is no soil thrown in about the roots—none being necessary. The roots, being at the bottom of the trench, quickly absorb sufficient moisture to encourage new roots, which, as soon as formed, the blanching process is begun, and the celery will be fit for use in four or six weeks from the time of being put in the trench. It is indispensable to cover the trench with leaves or stable litter to the depth of six or eight inches; but this must be done gradually—two or three inches at a time—as the season advances. If put on at once, it stops the evaporation from the mass of celery packed in the trench, and the blanching being prematurely hastened, it will not keep so well. A great advantage we find in this way of preserving winter celery, is in the easy access we get to it in all weathers,—nothing more being necessary than to remove the litter and take out what is wanted, and cover in carefully again."

[A cheap easy way of raising celery is certainly a great desideratum, the above is worthy of a fair trial on a small scale. We fear the celery will not be tender.—ED. *American Agriculturist.*]

Halsted's Hand Seed-Drill—Not Patented.

We present below engravings and a description of a new Seed-Drill, on exhibition at the Office of the *American Agriculturist.* It was designed and constructed by Mr. A. M. Halsted, a farmer of Rye, Westchester Co., N. Y., and the implement shows a good deal of ingenuity and mechanical skill in the maker, who, in addition to the ordinary farm tools, has only a common foot-turning lathe and the assistance of a neighboring blacksmith. He constructed one at first for his own use, but it operated so well that several of his neighbors have also had them made. Mr. Halsted, however, believes in every man "sticking to his trade," and as his business is farming, he offers the plans of his seed drill freely to any or every one who desires to make them for home use or for sale, and he offers his patterns to any respectable manufacturer who will put the machines into market.

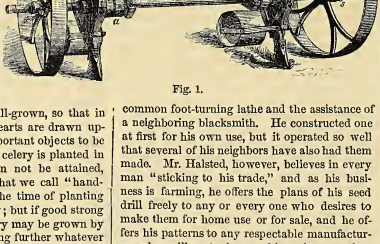


Fig. 1.

DESCRIPTION.—The size of the apparatus may be understood from the engraving—taking the wheels at nearly one foot in diameter. The letters in figs. 1 and 2 refer to the same parts. The two wheels may be fastened further or nearer apart upon the axle, being held at any point by the screws, *s*. The seed distributors are similarly adjustable, so that the implement can be used for sowing rows at different distances apart. The implement of this size and form is designed for the smaller classes of seeds. The seeds are put in the boxes or hoppers, *h*. Fig. 2 shows an enlarged section of the hopper, raised up, and of the rest of the distributing apparatus, made by cutting down through from front to rear. The seed measurers, *a*, fig. 1, (fig 2,) are little solid cylinders, with cup-like holes in the surface. These cylinders differ in the number of holes, in their distance apart, and in the depth and size of the holes—different ones being used for different kinds of seeds. The slide, *d*, is also movable up and down, so as to be made to fit the measuring cylinder more or less closely, and this increases or diminishes the amount of seed. The seed box, *c*, opens on a hinge at *g*, and is fastened down by a hook at *f*, to allow the change of cylinders. The seed drops from the measurer into the cavity *c*, and falls into the furrow made by the small hollow plow, *p*. The roller, following the plow or drill, covers the seed. The frame of the roller is attached at *k*, and the bracing rod for steadying the apparatus is fastened at *l*. All the parts are shown so plainly that further description is unnecessary.

Fig. 2.

Drilling better than Broadcast.

Drilling in field seeds is becoming quite common, but not enough so. Too many still adhere to broadcast sowing greatly against their own interests. It certainly stands to reason, that twelve stalks of wheat, or oats, or other grain, will do better if each grows on a plot three inches square, than if one such plot contain three or four stalks crowded together, while another plot has none. But this happens very frequently in a field sown broadcast. Again, if one seed be covered but half an inch, and the next one be worked down three or four inches by the harrow tooth, the two will come up unevenly, and grow unevenly. Air and sun-light are important agents in promoting the growth of plants, and the full effect of these can only be secured where the stalks are growing at something like uniform distances apart. The expense of a drill is the main objection to its introduction everywhere. But a single bushel more of grain per acre, on a ten or twenty acre field will go far to meet the cost of the drill, or at least pay a very high interest on the cost. And who doubts that much more than the extra bushel will always be secured by judiciously using a seed drill.

About Farm Implements.

It is "penny wise and pound foolish," to buy poor implements because they can be got *low.* Such will cost a vast deal of time and patience, and no little money to keep them in order, and even then not work satisfactorily. Moreover, there is a great deal of pleasure in using a machine or simple tool of the best make, not because they are expensive, but because they are handiest, and on the long run they are the best and cheapest. The interest at ten per cent is only $1 a year on an implement costing $10, while it is 50 cents on one costing $5. Very often the $10 implement will save half a dollar a day over the $5 one, by its better work, and saving of man and team power. Nor is this all that is important about implements. When bought, they should be taken care of. Before attempting to use them, they should be put into perfect working order. The knives of a mowing-machine should be well ground, the wheels and joints oiled, and the whole gearing put into complete trim before starting it; otherwise it will get out of order, time and patience will be lost, and the whole work be done unsatisfactorily. The same is true in general of harrows, horse-rakes, rollers, plows, hoes, shovels, and the commonest tools of the farmer's carpenter shop. Have a place for everything, and then keep everything in its place, and always in good working condition. But where do we often find the farmer's im-

plements? To-day, we saw a plow standing in the furrow, and yesterday one thrown up by the side of the fence where the Fall plowing ended. Last Fall, we saw cultivators and horse-rakes dragged up into the corner of a field among the bushes. Sometimes, the expensive horse-power, instead of being carefully housed, is left out in all weathers, from one thrashing season to another. Implements so used, seldom get their iron-work oiled to prevent rust, or their wood-work painted to prevent rot. It is the testimony of all good farmers, that the time and money spent in painting their tools, is more than repaid in their increased durability. There are very few farmers who can afford to have such large holes in their pockets as this carelessness makes. One must be either very rich or be making money very fast to be able to support such extravagance. If it be true, as it is often said, that farming, as a general rule, does not yield more than five per cent on the capital invested, we do not see how any body can afford such expensive habits. And besides, such a spendthrift style of living exerts a bad influence on one's family and on the whole neighborhood in which he lives.

Blinks from a Lantern....XXIX.

VISITS RUNOUT ROGERS.

Not a dozen miles from Higgin's Rest (described in the *Agriculturist* last year), lies the farm of Runout Rogers, or what was his farm, before he sold it, for he is to vacate on the first day of April, 1863, according to the terms of sale. Just what his mother was thinking of when she named him, I am not able to say. It is not a scripture nor classic name, or one belonging to the family. He was the youngest child in the family, perhaps seen to be the youngest and last from his birth, and on that account named thus, according to a custom that prevailed in the early history of this country, of naming children from some circumstance attending their birth or infancy. At any rate, the name was appropriate and prophetic, for he has run out every thing left him by his father, and pretty much all that he has earned, so that at the age of fifty years, when a man ought to have a competence and to be looking forward to a comfortable old age, he is obliged to sell the homestead to pay his debts and square up with the world. When this little job is attended to, he will not be worth a red cent. He was left at the age of twenty three with a fine dairy farm of two hundred and sixty acres, with no incumbrance upon it except a debt of five hundred dollars due to a married sister, who had not received her portion by that amount. It was the homestead of the family, all the buildings were in good repair, and the land in good heart, capable of keeping thirty cows with all the other stock needed upon a dairy farm. It was judged to be worth, at the time of his father's death, ten thousand dollars. He had made money upon the farm, paid for it and the stock, and left, at the time of his death, an estate worth twenty five thousand dollars, which made a rich man among farmers in the last generation.

I was drawn to the place by a sale of cattle, the last remnant of the stock—thirteen cows, a yoke of oxen, and horse, being all that the farm is now capable of keeping. The sale was hastened on account of the short crop of hay, and the well founded apprehension that the crows might forestall a sale if it was put off until Spring, when such sales usually happen. The place has the neglected air of a slipshod farmer, where no repairs had been made for twenty years, beyond those which necessity compelled. Shingles will wear out, and paint will grow dingy, and fences become dilapidated in that time. The mortar had rattled out of the chimney, and the dozen displaced bricks from the top proclaimed alike the passage of time, and the breach that was made in the fortunes of the owner. The house had, originally, been painted red, and then white, in the last days of the elder Rogers. It had been innocent of oil and white lead ever since, and the red and white appeared in about equal proportions, except where the weather had effaced all traces of paint. Here and there a clapboard had entirely disappeared, and occasionally one hung by a single nail, rattling doleful music in the winter wind. The bars were generally down about the premises, and the gates unhinged. Many of the bar posts had been split and bound up temporarily with white birch withes. No walls had been re-set in the days of the present owner, and the foundations were badly hove with the frost, and the tops were full of gaps. The barn had no cellar, and no sheds; the practice of the former owner having been to winter the most of his cattle at the stack yard—a practice that the son had most faithfully followed. The cattle had been gathered in the yard for the sale, and presented a very hirsute appearance. They were exceedingly thin in flesh, the rib-bones prominent, and the back arched, probably from the habit of drawing up into the smallest possible compass during the keen winter blasts.

"What makes your cattle so fat Mr. Rogers?" I asked courteously, to draw out his views on stock.

"The Fall feed was rather better than common, and as I had not hay enough to keep them through the Winter, I intended to give them all they could eat, to get them ready to sell."

"And how long have they had full feed?"

"Well, I guess about a week. I should have begun a little earlier but I did not calculate to have the sale so early. Hay was so high that some of my creditors thought it would be worth more to sell now than to feed out this Winter."

"So you are in debt Mr. Rogers?"

"I am in nothing else," he replied sorrowfully, "and never have been. You see I was in debt five hundred dollars when I begun, five and twenty years ago. But I had a large farm, and a good one, and it used to bring in crops and produce worth fifteen hundred dollars a year, so that I had enough of every thing, and did not pay any particular attention to the debt. I could have paid it then easy enough, in two or three years, but I let it run without paying the interest. Somehow the farm did not produce as it used to when father owned it, though I did every thing about as he did only I did not make so much manure, as I always thought it cost more than it came to, to cart dirt into the barn yard, and then cart it out again. After a few years I found I did not bring the year around without getting in debt, and I had to hire money to pay up my store bills. The seasons seemed to change, the Springs were backward, and the frost come early in Autumn, killing the corn and spoiling the after feed, and I have had to reduce my stock and get in debt, until every thing is mortgaged, and I have now had to sell out entirely to get square with the world. Don't you think the land is running out round here?"

"I rather think *men* have run out." I replied, bringing the glare of my lantern full in the face of Mr. Rogers. The man looked blank, probably not half comprehending my meaning. But here it is—the same old story over again—the soil ruined for the want of brains to till it. You talk a great deal in the modern age about improved implements of husbandry and improved tillage. The greatest want of all is improved men. A *man* in the place of Runout Rogers would have kept this old homestead improving, so that it would support a hundred head of cattle. The soil has run out for want of a man to till it.

If I might trace the process by which he has lost his farm, I should say his first error was that he has paid no particular attention to his business. Farming is as much a business as buying and selling merchandize. The merchant that never takes account of stock and balances his books to see how he stands, soon falls. Mr. Rogers never did this, and so had no reason to suspect he was losing ground until half the value of his farm was eaten up with debts.

Then he has paid no attention to manure making, which is the sheet anchor of good farming every where. With a stock of thirty cows when he took possession of the farm, he never made over a hundred loads, and it has been growing less ever since. He had all the facilities for making six hundred loads a year, and only lacked the enterprize to do it. There is a muck bed of seven acres, so deep that no bottom has ever been found, within a quarter of a mile of his barn.

Again, he has sold grain and hay instead of feeding it out upon the farm, thus compelling a reduction of stock and smaller sales of butter and cheese, and of other animal products. His stock have had no shelter in Winter, thus costing him ten dollars a head extra for feed, and diminishing their product of milk during the Summer. His fences have not been kept in repair, and he has lost some of his crops every year by unruly cattle. The result has been, a running out process all round—less grass in the pastures, less hay in the meadow, less stock in the yard, and fewer pigs in the sty, until a sheriff's sale closes the scene. Is there not a moral in the life of Runout Rogers?

A Cheap, Strong Wind Mill.

There are many kinds of half-hard labor to be done upon the farm, more fatiguing from their constancy, than their intensity, for which some cheap power is wanted. A few of these operations are: churning, washing clothes, grinding apples for cider, mashing grapes, currants, and blackberries for wine, sawing wood, cutting hay, straw, and roots, shelling corn, etc. These are usually performed by hand labor, but it is tiresome to continue them steadily, and we see no reason why a good, cheap wind power may not be constructed, which shall take the place of manual labor. The power may be light, and even portable. It should be self-regulating, cheap, simple, and very strong in its ability to resist high winds and rough usage. Why such a mill is not in common use, is a question we refer to farmers of mechanical turn of mind, whose name is legion. We know of no such mill.

Attend to the Wood Lot.

In reference to the expediency of thinning out wood-lots, opinions differ. Some wood men hold that a forest should not be touched with the ax except when it is purposed to sweep the whole down. After this is done, say they, we may clean up our ground for crops, or may let a second growth of timber spring up. Others hold that a lot may be judiciously thinned every year or two, and thus renew the timber gradually, without ever cutting down the whole. For an old forest, where the trees have nearly made their full growth, and where there are only a few young trees, and they quite small and poor, thinning out will do very little good. The old and middle aged trees have grown tall and slender, and have got their character formed beyond much improvement. Their roots are small and run near the surface of the ground, and if we take away the surrounding trees, these slim and unanchored sons of the forest will be sure to topple over. And then, the few young trees will grow not nearly so fast, and never become so vigorous and handsome as they would in a more open situation. The better way then is to cut off the whole race, and begin anew. If the lot is fenced in, and *fires* and *cattle* kept out for several years, the young wood will make a vigorous growth, and a new thrifty forest appear with marvellous rapidity.

But suppose the wood-lot is a comparatively new one, the trees from fifteen to twenty feet high; then by all means thin out. For, when in mixed woods, trees are allowed to grow up indiscriminately, there will always be more than the ground can well sustain. Their roots will ramify in every direction, filling the soil with a massy net work, crowding and exhausting each other. Thin them out judiciously, and then there will be pasturage enough for the roots of all. The trunks and tops of those left will be better formed than they could otherwise be. A writer on forestry says that "in raising a plantation for timber, the approved rule for hard wood trees is, to leave a space around each tree equal to one-half its height; and for resinous trees, a space equal to one-third its hight. This should be kept in view from the moment the thinnings commence."

From this same source, and others, we learn that in Germany this matter is regulated by the government. Competent and educated agents are appointed, who see to it that no forest is destroyed through wantonness or neglect. They plant new woodlands, first plowing the fields selected and sometimes fenced in, and sowing the seeds of various trees. The crooked and feeble seedlings are pulled up the second year, and good vigorous ones are supplied in their places if necessary. In about ten years a radical thinning is made, only enough trees being left to just shade the ground. In this work of tilling the land and thinning the forests, a multitude of the peasantry find occupation, who would otherwise suffer for want. Shade is indispensable to the growth of the seedlings of many, indeed of most of the forest trees. When a forest is to be cut down, and re-seeded with the same kind of timber, the thinning out is carried to that extent, that but a few of the most sturdy and most fruitful of the monarchs of the forest are left. The ground then being cleared and prepared for the seed, as soon as a good mast is had, the new forest is sown—and the old trees stand a few years to protect the young growth.

Probably we should not like to have the government interfere with our forests, but the foregoing will show how much woodlands are valued abroad, and how deserving they are of intelligent care. Our own interests and those of our posterity are concerned in this thing, and we should give it our best consideration.

Pickling Wheat and Other Seeds.

Hewitt Davis, says, in the Agricultural Gazette, that his practice for many years was to use copperas, arsenic, and other mineral poisons, for preparing wheat for sowing, as a means of preventing smut, burnt ear, etc. But having lost a valuable lot of turkeys which accidentally got into a newly sown field, he was led to think further on the subject, and came to the conclusion that the benefit of pickling was mainly due to the cleansing during the pickling and washing. He has since found that the washing of grain in plenty of water floats off the impurities, and light imperfect grains, and is just as effective as the former pickling.... The editor recommends soaking the grain in a solution of Glauber's salt (sulphate of soda), which can be purchased cheaply. The grain is afterwards dried off with dry lime.....M. Leluz , of France, advises to soak wheat seed in a brine, made by dissolving at the rate of one pound of Glauber's salts to a gallon of hot water. A gallon of this is poured over each sack of wheat seed and about 2 lbs. of fresh slaked lime thoroughly mixed in to dry it off. The action of the salt and the lime is to destroy the smut and other fungi, while both together form an efficient fertilizer. We commend this method for preparing Spring wheat seed, and also for Winter wheat. The Glauber's salt (sulphate of soda) is very cheap, and can be bought in small quantities for a few cents per pound. It is sold in New-York, at wholesale for one cent a pound, or even less.

Potatoes—Small or Large, Whole or Cut.

"Big, and the but end, by all means," says one. "Cut potatoes, if you want to economize," says another. "It is of no consequence," says a third. "They will rot any way," says a fourth.

There is a great variety of practice which shows that this very useful vegetable will bear more abuse than almost any other crop grown upon the farm. The writer has tried almost all methods and has settled down upon whole potatoes, an inch to an inch and a half in diameter, as, on the whole, the most desirable for seed, taking into account the immediate crop and the future welfare of the tubers. If we look merely at the immediate crop, we can doubtless get more from a given amount of seed to cut them into single eyes, than to plant them whole. But we have very strong suspicion that this cutting weakens the stamina of the plant, and if followed up with any variety for a long series of years would run it out. We ought to follow such a method, if we can discover it, as will keep the plants in the highest health, and make the crop sure and remunerative.

We have grown good potatoes from the smallest seed, a half inch or less in diameter, but it was only upon very rich soil and with extra care. The objections to using large potatoes whole, are the extra expense for seed, as it requires from twelve to fifteen bushels to the acre, and the over stocking of every hill tending to produce a great many small potatoes. The medium size removes these objections, furnishes just about seed enough, stocks the hills sufficiently, and preserves the health of the plant. This practice we have followed for several years and on the whole, it gives the best results.

If we admit the theory to be correct on which the practice is founded, it would not follow that it would in every case preserve the crop from disease. Almost every variety has been subject to cutting and to disease for many years, and no one can be perfectly sure that he plants a sound healthy tuber if the size is every thing desirable. If the constitution has been weakened in any way it is much more likely to be injured by the hot, wet weather of August, than a strong plant would be. The universal prevalence of the rot is probably owing quite as much to the treatment of seed, as to soil and climatic influences.

Hints on Tobacco Culture.—No. I.

STARTING THE PLANTS.

Without stopping to discuss the moral question of tobacco using, we will only treat of its agricultural bearings, and here is a wide field. Exhausted acres once most fertile, impoverished farms and plantations which a few years ago teamed with luxuriant growth, whole counties and sections of States ruined as to present prosperity, testify sadly to the results of the wrong culture of this poisonous plant. This is a matter of history and fact. We hold that these results need not have been, and need not be.

Tobacco, properly cultivated, offers the farmer a very quick way of turning manure into money. The temptation is to turn also the fertility of the *soil* into money, and thus exhaust it. Few crops will bear to grow upon the same land year after year; with manure enough, tobacco may be thus raised, and as this saves labor, it furnishes powerful temptation to labor-sparing farmers. *It never ought to be cultivated except in a regular rotation.* As a cleaning crop it is valuable, for it will neither endure weeds, nor will they grow in its shade. It requires high manuring, thorough tillage, and freedom from water in the soil—so that soil on which good tobacco has been raised, is easily prepared for almost any other crop.

THE BEST SOIL is a good deep loam, and the best situation one not exposed to early Autumn frosts; first-rate corn land is good tobacco land. If broken up from sward, this should be done the Autumn previous, though by plowing early and repeatedly before the time of setting out the plants, the land may be well subdued, even if taken up in the Spring. There should be an application of manure equivalent to 40 or 50 two-horse loads to the acre—the coarser half of which should be turned under 7 to 9 inches deep, and the rest afterwards be placed on the surface, and plowed or otherwise worked in.

THE SEED BED must be prepared and sowed by the middle of April, in the warmest and best place on the farm—allowing about a square rod for each acre intended for tobacco. This bed should be deeply spaded, richly manured, and it is an excellent plan to lay on a mass of brush and dry litter and burn it, before smoothing and raking over the bed. This destroys weed seeds, adds fertility in the ashes, a dark color in the charcoal, and makes a most friendly preparation for the fine seeds. The seeds may be sprouted before sowing, by mixing them with fine earth, moistening, and setting a few days in a warm place. This is advisable only in late sowing. Use a large thimblefull of seed to the rod, if you are sure of your seed. It is always best to prove the seed by previously sowing a little in a pot

placed in a hot-bed or under a glass in the house, and kept warm. Thoroughly mix it with half a pint of fine soil before sowing; sow the seed, and then roll the bed with a hand roller, or spat it down evenly with a shovel. The bed must be shielded against frost and beating rains by covering it with boards or cloths, (hay caps are good). When the young plants appear, occasional waterings with *dilute* liquid manure promote a more vigorous growth. They must be thinned out where crowded, and scrupulously weeded. They will grow unevenly and slowly; and the largest will be ready to transplant to the field about the tenth of June, in latitude 41°—earlier at the South, and five to ten days later, if further North, at this time they may be transplanted 2½ to 3 feet apart in rows 3 feet apart. The period of transplanting continues, according to the weather, for some days, or even weeks. The young plants root easily, and grow rapidly, particularly if we have warm, moist days and, when well rooted, luxuriate in our hottest Summer weather.

[PRIZE ARTICLE.]

Cultivation of the Oat.

BY S. P. N.*

The Oat is cultivated, perhaps, more widely than any other of our grain crops, having but few enemies, tolerant of great differences of soil and climate, and producing remunerative crops on the poorest soils. Owing to its strong assimilative powers it seems one of the best means for the extraction of fertility from an almost exhausted soil. And although by some, and not a few, it is so used, yet when judiciously introduced into a rotation, it is not so greatly an exhausting crop.

PREPARATION OF THE SOIL.

It is a common custom to sow Oats following corn, although they require a rather heavier, closer soil, the desirable qualities being moistness, and a reasonable compactness; a clayey loam is the best soil, as the plant is impatient of drouth. The ground should be broken as early in the Spring as it can be *well* worked, plowing deeply, Oats being better able to bear the bringing up of a portion of the subsoil than most other crops. The teams at that time are stronger, the ground loose from the effects of the winter frosts, and the absence of sward still further favoring, it seems the most suitable time for the deepening of the soil, an object which should be ever in view with the farmer.

PUTTING IN THE SEED.

As soon as practicable, after plowing, the seed should be sown. For several reasons I give preference to drilling in the seed, for by so doing (1st,) the seed can be more evenly distributed than by hand sowing; (2d,) the covering is more perfect and uniform than either by the harrow or the plow; (3d,) the amount per acre can be more exactly regulated; (4th,) the grain comes up simultaneously, and starting evenly it does not present the spotted appearance of many fields, and (5th,) the grain is much less apt to lodge. I have had, and also frequently seen, drilled oats stand well side by side with badly lodged hand sown grain where no other difference could be assigned than the mode of sowing. I allow the ground to dry sufficiently to bear rolling after plowing, then drill in the grain not more than two inches deep, one inch indeed on my heaviest lands, and then finish with the roller again. Large breadths of oats are well put in by sowing immediately on the fresh plowed lands, harrowing twice, first lengthwise of the furrows, then across, and finishing off by rolling the surface; the last an important matter in laying down a field of this grain. Should the soil be liable to have water stand upon it after a rain, it should be underdrained, or at least, after sowing, water furrows should be opened with plow and shovel for its exit; no grain but rice can be expected to become aquatic in its habits, to accommodate careless farmers. The amount of seed sown varies from two and a half to four bushels per acre, my own heaviest crops have been from three and a half bushels of seed. As a general rule the better and the heavier the soil the more seed it will bear; three bushels is the average and is safe. The earliest sown crop, except in very rare instances, is the best, both in weight and yield, though the eye may not detect the difference.

VARIETIES.

With respect to the kind to be sown there is much difference of opinion, but it seems well established that the *Black Poland Oat*, is one of the best, if not the best variety, weighing sometimes fifty pounds to the bushel. The *Imperial Oat*, is also very heavy, and is preferred in the Northern and Middle States to most other improved varieties. It has a clean bright, plump grain, almost equaling barley in solidity, and it is very prolific. The *White Poland Oat*, first distributed, I believe, through the *Agriculturist* Office, and now widely multiplied, is also a beautiful, prolific, and very heavy grain. The common *White Oats* are the most extensively cultivated in the United States, and are hardy, yielding tolerably well, varying with the season more than most others in weight, a bushel weighing from fifteen to thirty four pounds. Oats are found when long sown on the same farm to deteriorate both in the weight and yield, and great advantage results in obtaining seed from other localities, especially from cooler latitudes. I have twice imported Oats from England, the Potato Oat, and another variety of unknown name. When sowed they weighed 44 pounds to the bushel, but year after year they became lighter until they were abandoned for a black Oat obtained from Prince Edward's Island, N. B., which I have sown for a number of years without any perceptible diminution of weight or produce. Possibly under my present mode of selecting seed the English grain might have been kept up.

SELECTION OF SEED.

I adopt the following mode: taking a marketable article I place in the fan mill, instead of the usual screen, a board three or four inches shorter, and by a rapid turning blow over about one fourth of the grain. The portion which runs down its usual course will thus be the best and plumpest grain, and I find will keep the crop up to the standard weight apparently indefinitely, which is all we can expect in our latitude. I think farmers would find their account in this mode of obtaining most of their seeds. [This is certainly so—" like produces like."—ED.]

HARVESTING.

In harvesting, which is generally done by the reaping machine, care should be taken to guard against cutting too green, for although the straw is better for fodder, the grain, unlike wheat or rye, is not so heavy, as I have found from trial; and the injury from binding too hastily is greater, for the Oats pack more closely in the sheaf, shock, and mow. Owing to this close packing many farmers have abandoned the reaping machine, and returned to the cradle in harvesting Oats, the "gavels" thrown off the machine frequently receiving injury from wet, while the swath of the cradle will dry out after a shower, almost immediately, without even turning. It is the practice among some farmers to draw in their Oats without binding, the gavels being loaded on the wagon, with forks adapted thereto, in the manner of sheaves, buts outward, and then pitched indiscriminately into the mow like hay. If stacked, more care is used, the gavels being placed buts outward, at least on the outer course. But from repeated trials of both plans, I give the preference to binding; the difference in time is not noticeable, and the room required in the mow less; the thrashing, also, is much expedited. In the field they may be protected for some weeks, if necessary, by a mode of miniature stacking, as follows: I place from fifty to one hundred sheaves in a shock, commencing in the center, by laying four sheaves in the form of a cross, the heads together and over-lapping considerably, and in the angles others, for a center; then a ring with the buts out, the tops a little further in than the bands of the center sheaves, and build up to a point, capping with a large sheaf, buts upward and the tops spread evenly on all sides to shed the rain around the shock. It is well, however, to get all grain under cover as soon as practicable. [That is, as soon as there is no danger of heating in the mow.—ED.]

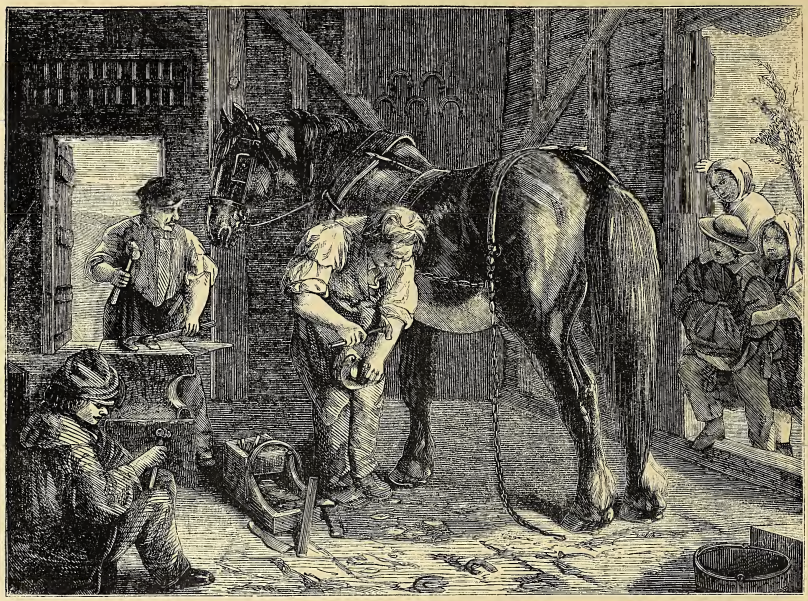
THRASHING AND MARKETING.

The thrashing is now almost entirely performed by horse power, machines being used and taking the place of the flail and of the old mode of treading out on the barn floor by horses. I find it most expeditious in cleaning up from the chaff to perform the operation twice; first with a large-meshed riddle or screen, and then with a finer one of say four meshes to the inch. A nice clean sample of grain is always of readier sale and will command a better price than the same article mixed with dirt and trash, buying grain being a science as well understood as selling it, and farmers can find little profit in paying freight and commissions on dirt in grain. The best market for Oats is probably New-York, if the producer is not so far off as to consume his profits in freights. The large grain dealers there, if applied to, will furnish bags to the grower at a small percentage, and sell the grain on moderate commission, often doing better for the farmer than he could for himself in that great Babel. There the Black Oat is preferred; in Philadelphia it is almost unknown, the white sorts taking its place.

GENERAL REMARKS, ROTATION, ETC.

On soils equally fertile, oats are uniformly heavier and more prolific in the cool latitudes and in moist seasons. They are esteemed, though I think unjustly, an exhaustive crop. Their place in the rotation in this latitude, is usually after corn; the Oat stubble is then plowed up for wheat, thus injudiciously, as it seems to me, bringing two straw crops close together. This course I have abandoned, and introduced clover between the two; sowing it thickly with the Oats, pasturing it the next summer, and plowing that sod up for wheat; the results are eminently satisfactory. [The rotation would then be (1,) corn on sward ground with manure; (2,) oats without manure, seeding down to clover; (3,) pasture; (4,) clover turned under and wheat sowed, seeding down to grass; (5,) wheat taken off and grass remaining; (6,7,8,) grass mowed two or three years—perhaps receiving top-dressing the second year—then wheat.—ED.] Oats are benefitted by almost any of the usual fertilizers. Lime applied immediately to the crop, has the effect of retarding its ripening, and is thereby often of questionable benefit, exposing the plant for a longer time to the accidents of the season, and also to insects. Ashes have rather the contrary effect, and seem to be peculiarly efficacious in increasing the yield. Nitrogenous manures, such as Peruvian guano, are apt to cause luxuriant growth and consequent lodging if applied too freely. The best mode of manuring the Oat crop, is through the preceding crop, getting the land in good heart, and not by specially stimulating the growing plant. On sod they rarely do as well as the quality of the soil would lead one to expect. The chief enemies of the Oat are: rust, the army worm, and the aphis. The army worm, if he comes, has it all his own way, though a deep furrow plowed round the field, the furrow slice thrown towards the fence, and pits dug at intervals, into which the worms fall, has proved measurably successful, many bucketsful of worms having been thus taken by single farmers. The aphis is a plant louse of a reddish color, that attacks the upper part of the stalk and the stems of the head, and sucks the juices, causing shriveling of the kernel, though the husk seems of full size. Very extensive damage was done to the crop by this insect during the past Summer. Rust has been extensively damaging in some seasons, particularly in the West. I believe no remedy is known. The above is the result of 15 years experience in farming, during the last 10 of which, Oat growing has been rather a specialty.

* The name and address of this writer (whose letter is post-marked New-Jersey) can not be found; will he please notify us that he may receive his prize.—ED.



THE VILLAGE BLACKSMITH.... FROM A PAINTING BY R. ELMORE, R. A.

Engraved for the American Agriculturist.

Man with the rugged sinews, man with the face of soot!
Come forge for us a horseshoe, fit for Eclipse's foot!

The principal figure in the beautiful picture which our artist furnishes for this number of the *Agriculturist*, is a very important personage to those who have horses to be shod. "No foot, no horse!" is a good old proverb, and the preservation of good feet, or the improvement of bad ones, largely depends upon the skill and care of the Village Blacksmith. Those who cluster round his forge these raw nights, to gossip over the latest news of the war, may not think it, but the part the Blacksmith operates upon is a complex and cunning structure, admirably adapted for its work, but liable to derangement and disease if neglected or improperly treated. As sure as the sparks fly upward, your horse, though he be worth five hundred dollars now, shall be lame, if he is long shod by an incompetent or careless Village Blacksmith. The latter is sometimes ignorant of the principles which should guide him, and too often despises their application when informed of them. He will rasp and pare and hammer as if the foot were a mass of insensible horn, whereas it is a complicated elastic spring, with a cushion attached, to receive easily the weight of the horse. If this were not so, fancy the shock which every stroke of Mr. Bonner's marvellous fast trotting mares must give to the joints of the frame above. Instead of preserving this elasticity with the greatest care, the workmanship of our Village Blacksmith is too often calculated to impair and destroy it. Hence inflammation of the interior tissues, navicular disease, and the incurable lameness consequent upon it. If you do not know about the navicular bone, the *hinge* which holds the coffin and coronet bones together, we have not space here to describe its functions. See to it that your Village Blacksmith does not bind your horse's heels to the rigid iron shoe so that they cannot expand when his weight comes upon the foot; for if he does, a contracted hoof and navicular lameness will follow. Sometimes there is hereditary predisposition to this. The stock of American Star need care in this matter. The famous English mare Cobweb inherited it from her sire, and though her own feet were very fine, she communicated it to her great son, Bay Middleton. He was a magnificent cripple at six years old, though he had been sold for $25,000. All the veterinary skill of England could not save him from incurable lameness.

The Village Blacksmith commonly has an ideal as to what shape a horse's foot should be, and he will twist and rasp the hoof to conform to it, if you will let him. Do not permit it, for the foot shod should be like the foot unshod, minus the iron which is to protect, not wrench and cramp it. They say that the devices of mantua-makers cause consumption and dyspepsia among fine ladies, and the Village Blacksmith will sometimes be guilty of corns, of pumiced sole, or of navicular arthritis, if not watched. He must be induced to regard his business as a progressive science, not as a mechanical operation which can not be improved. Insist upon it that he give the crust of the hoof at the heels a fair bearing upon the shoe. Limit him to five nails in the fore shoes, and seven behind, those on the inside to be well forward towards the toe. He will predict the loss of much iron, but regard him not. These nails are sufficient to keep the shoe on, and the inside quarter of the hoof being free, the heels expand naturally when the foot comes down in work. Our stalwart friend of the leather apron, too, may want to pare down the frog. Stop him! for if you do not, you will find, too late, that his knife has entered into your soul. This frog is the cushion, nature's own buffer and fender, between the foot and the solid ground. Then, hearing you speak in favor of open heels, some Village Blacksmiths will cut away the sides of the bars. This will make the heels *look* open, but it is just like the application of cosmetics to the skin. Temporary looks are obtained at the expense of permanent injury. Forbid peremptorily the burning of your horse's foot with a red hot shoe to make it fit. It will render the hoof hard and brittle, liable to sand cracks, and so will too many nail holes. The shoe moderately hot may be held to the sole to mark the places to be pared—the knife must do the rest. Usually the Village Blacksmith is a man of worth and probity, and though a little opinionated sometimes, address on your part will induce him to follow the instructions of science, and take more care in the shoeing of your horse.

For the American Agriculturist.

Hints on Cabbage Growing.

A failure of this crop is common from the disease called "anbury," or "fingers and toes;" the roots swell, and after a time rot off; new roots are often sent out which keep the plant alive, and give hopes of success. But the disease soon reaches the new roots, and after a hard struggle the plant dies, or starts too late to make a good head. Fortunately, this most destructive disease generally shows itself by the time plants are large enough to set, and where the roots show the least tendency to swelling, the plants should be rejected at once. The grand remedy of the cabbage growers who supply our large vegetable markets is, never to plant the same piece of ground with this crop two years in succession. The cabbage is more sensitive than most other plants, to feeding upon its own decay. For this reason, unusual care should be taken in preparing hot-beds for starting plants, during this month. If the same soil have been used for starting plants the year before, it will be very likely to impart the disease to the young plants. Very much depends upon the preparation of the seed bed, whether it be under glass or not. For late plants it is well enough to plant the seed in the hills, but for the early crop, it is indispensable to have either cold-frame plants, kept through the Winter, or those started as early as March, in a gentle hot-bed. Whatever the amount of manure used, there should be at least six inches of fresh soil upon the top. Leaf mold from the woods, mixed with sand or with yellow loam, makes a good seed bed in which to start the plants. The writer has always succeeded better with cabbage upon green sward broken up the previous Fall, than upon any other ground. In such a soil, we may use almost any quantity of stable manure with decided advantage to the plants. Hog manure is always to be avoided. I have never yet succeeded in composting it with so much muck as to make it entirely safe for this crop. Ashes are excellent, both as a manure and as a safeguard against insects. They should be used in the seed bed, and around the plants, soon after transplanting. JONATHAN.

A Dish of Green Peas.

This is one of the earliest garden crops that can be put into the ground. For the first crop, select the dryest and warmest corner of the garden, sheltered by a wall or a high and tight fence if possible, and open full to the south. The ground should not be manured the same year it is planted to peas, or the vines will grow too rampant, and bear few pods. It should, however, have been enriched the previous year. Some of the old school will tell you not to sow peas in the "new of the moon," lest the vines all run to stalks, and not to fruit. But let the moon alone, and sow the peas as soon as the season opens. The frost being well out of the ground, break it up by spading, and rake it down level and fine. With a garden line, lay off the drills as long as you like, and at least two inches deep. A good method is to make two drills six inches apart, then to leave a space two and a half feet wide, or more, for tall growing kinds, for a walk between them; then the next pair of drills, and so on. The peas are scattered in the drills about an inch apart, and then covered with the back of a rake. One row of brush is stuck for two rows of vines. For this purpose, the best material is brush from the woods, especially the fine bushy limbs of birch trees. Yet the spray of almost any tree will answer; and the bushes should be from three to six feet high, according to the kind of pea. Another method, often practiced where brush is scarce, is to drive in stout wooden stakes, six feet apart, along each row, then pass a line of strong twine from end to end of the rows, taking a turn around each stake as you proceed. Begin when the vines are about six inches high; put on a second line when they are two feet high; the tall varieties will want a third string. Do not put down the brush at the time of sowing. Let the plants get several inches high, give them two or three hoeings and thorough weedings meanwhile, the last time drawing up the soil around the stems to prevent them from being blown about by the winds: then bush them. To get a very early crop, sow the peas under the lea of a sunny wall, in drills running east and west, and have a frame of boards, shaped like an eaves-trough, to set over each row in frosty nights and during cold rains. Set it up on the edge by day to reflect the light and heat of the sun on the young plants. Of the many varieties now in market, we can not speak at length. *Early Kent* and *Daniel O'Rourke* seem, just now, to dispute the field as to *earliness*. Both of them and the *Prince Albert* are early, and fair quality peas. For a little later crop, the *Champion of England* ranks high: it is very sweet, rich and high flavored. The *Marrowfats*, of course, will always be in vogue.

A Spring Tart—Rhubarb.

Does anybody doubt, or not know the desirableness of this vegetable? Then we pity him. It is one of the finest things in the world, to make a pie or Spring tart. Apples often give out in April and May, and those which remain are wilted and tasteless. Man's stomach longs for something fresh, crisp and juicy: the pie-plant affords that very thing. It forms a connecting link in the year-long chain of articles for pie-making. Think, too, of the doctors' testimony that it is "one of the most wholesome, cooling and delicious substances that can be used for the table. For dysentery in children, it is an infallible remedy, stewed, seasoned with sugar, and eaten in any quantity with bread." We have tasted samples of fair wine made from this plant. It is also used for jellies and jams.

Mode of Culture.—Procure a few crowns, with roots attached, and set out only one in a place. Rhubarb will live in any kind of soil, but to get large, succulent stalks, the soil must be deep and rich. Five or six plants are enough for an ordinary family. Lay off a bed twenty feet long by four wide. Remove the top soil, break up and manure the subsoil heavily, and then return the top spit to its place. This last should be enriched with a light dressing of old manure, and if the land is a stiff clay a little sand should be worked in. Now set out the crowns by a line, four feet asunder, leaving the plump, pinkish buds an inch or two below the surface. This work may be done in the Fall, or early in Spring. New roots will soon form, and the growth will rejoice the eyes of the planter.

The after culture is very simple. Keep the ground free from weeds. Pluck no leaves the first year. In the Fall, put a peck or more of coarse manure around each plant. This will protect the roots, and furnish nutriment for the next year's growth. In the second Summer, the leaves may be plucked in moderation, and after that, quite freely. Let the plants, however, have their autumnal dressing, to be forked into the soil the following Spring. In our own grounds, we have pursued this course several years; and now the stalks and leaves of our plants are so magnificent, we are often asked the names of our new and improved varieties. We uniformly reply by simply pointing to the manure-heap.

Forcing.—If any one wants to get a very early tart or pie, let him (say, by the middle of this month,) set a barrel or rough box, headless and bottomless, over the crowns of several early plants, and surround the same with fresh manure from the horse stable. Put a few forkfuls inside of the barrel, and a bushel or more outside. This will soon generate a local climate of 50° or 60°, and give the plants a start while those out of doors are asleep. The barrels should be kept nearly or quite covered for ten days, and then gradually opened as the season and the plants progress. Add a little fresh manure outside, after the first week. As soon as the out-door plants are fit to cut, the forced ones should be uncovered and allowed to rest.

Varieties.—Good cultivation will improve the commonest varieties, yet there is a choice in sorts. Here are some of the best now known:

Myatt's Linnæus.—This, probably the cap-sheaf, has the least acidity of any known sort, and therefore is very desirable in these times, when sugar is so costly. It is very tender, needs no peeling when cooked; is also highly aromatic.

Myatt's Victoria.—Early, not very sour, productive, color dark red.

Tobolsk.—Stalks small, but of fine flavor, very early, good for forcing.

Giant.—Stalks round, green, very large, often four feet long, and as thick as a man's wrist.

Downing's Colossal.—Truly magnificent. Stalks very long and large, tender, high-flavored.

(PRIZE ARTICLE.)

Family Vegetable Garden.

BY P. C. REYNOLDS, ESSEX CO., N. J.

The garden is a *domestic institution* that has been too much neglected in this country, greatly to the detriment of the health and enjoyment of our people.

THE GARDEN SPOT should have a gentle descent toward the south, most writers say southeast, but there are grave objections to an easterly exposure. If after a very cold night in Winter the first rays of the morning sun fall directly upon the frozen plants, they are liable to be injured by the sudden thawing, while if more gradually thawed by the air before the rays of the sun strike them, they may escape. So in Spring, tender vegetables might survive a slight frost if not exposed to the direct rays of the morning sun. A garden should be protected from the northerly winds by hills or woods, or in the absence of these by a high, tight board fence or wall, and thus situated and protected will be several days earlier.

SOIL.—The best soil for a garden is a sandy loam, having but just enough sand to prevent its packing down hard, or baking after heavy rains, free from stones large enough to hinder the cultivation of the most tender plants, and containing enough vegetable mold to give it a dark color, as such a soil absorbs the heat of the sun more than a light colored one, and is warmer. Depth of soil is requisite to successful gardening, especially to the production of good root crops. The subsoil should be porous enough to permit the water to pass through it readily, but not so open as to allow the fertility of the surface-soil to leach through it. A subsoil of coarse sand or gravel would be liable to leach, while a porous loam, containing clay, would allow the passage of water, but retain the pabulum of plants. If the subsoil of a garden is so compact as to retain the water which falls upon it until it is evaporated, it will be a cold, sour garden spot. To ascertain whether it is too compact or not, take a shovel, (not

spade) and if you can dig a post-hole three feet deep without difficulty, it will answer, otherwise it should be subsoiled or trenched. The former method is the more expeditious for a large pit, the latter the more effectual.

SUBSOILING AND TRENCHING.—Subsoiling is performed by following in the surface furrow with a subsoiler, which merely raises the subsoil two or three inches, thus loosening without inverting it. It acts upon the subsoil somewhat as the mole does upon the surface. The furrow should be turned deep and *narrow*, so that the subsoiler—which is quite narrow—can break it all up. A garden should be made friable to the depth of at least two feet. But the gardener who means to do up his work thoroughly, even though it require a little more labor and expense at first, will trench his ground.

Trenching may be performed as follows: take a good strong spade, draw your line upon one side of your ground, and open a trench two spades wide, throwing out the entire *soil*, then press your spade its full length into the subsoil, raise the dirt a little, and let it fall back into its bed. Open another trench the same width, throwing the top soil on to the first trench. Loosen the subsoil as before, and so proceed until the ground is all trenched. To fill the last trench, take up the soil thrown out of the first in a wagon or wheelbarrow, and move it around to fill the last. An active hand would soon trench a large garden in this way, and it would not be necessary to repeat the operation in several years. A great deal of subsequent labor will be saved, and much more satisfactory results attained, by the proper preparation, and fertilization of the garden plot.

MANURING.—I would prepare my garden plot in the Fall, and after subsoiling or trenching the ground, would draw on well rotted barn-yard manure—a mixture of the dung of all the domestic animals—at the rate of about twenty five two-horse loads to the acre, and plow it in to the depth of about six inches. I would then draw on about half as much more, spread it over the surface, allowing it to remain upon the top until Spring, when I would turn it in and thoroughly mix all the manure with the soil by several plowings. If the soil had been much exhausted, I would apply fifty two-horse loads to the acre. The garden should receive a moderate dressing of manure every Fall. [Certain parts of the garden we prefer not to have manured every year.—ED.]

IMPLEMENTS.—The first thing needed to properly lay out the garden, walks, beds, and rows, is the *Reel and Line*. The reel should be of iron, and the line of hemp, at least six rods in length, and ⅛ of an inch in diameter. A spade and a shovel will be required in many of the operations, and to still further pulverize the soil for beds, and to add more manure to special crops, no implement is superior to the *digging fork*. To draw drills for sowing seeds at uniform distances, and in straight lines, some two or three *drill markers* are convenient. One should have the teeth about 11 inches apart, another should have them 15 inches; by taking out the alternate teeth it would answer to make drills 30 inches apart. Another should have the teeth 18 inches apart, so as to make drills of 18 inches and three feet distance. Each marker should contain about five teeth, and should be made of hard wood. The steel-tooth rake is very necessary to finely pulverize and level the surface of beds, and free them of stones, lumps, and rubbish. A *hand roller* is useful to smooth and compact the surface after the seeds are sown. One should be of hard wood or cast iron, and may often be used to advantage in crushing the lumps before sowing. The *garden trowel* is used in transplanting, where it is desirable to remove a lump of earth with the roots. A good *steel hoe* of the very best material and make, and the *Dutch* or *Shuffle-hoe*, are indispensable articles in the garden. The latter will greatly facilitate the labor of cutting up weeds between the rows. The *garden watering-pot* should be of the best tin, strongly made, and capable of holding twelve to fourteen quarts. The *rose* or *sprinkler* should be perforated full of very fine holes, so as not to beat down weak plants. A *wheelbarrow* with a wide wheel, and side-boards that may be very readily removed, is an important accessory of the garden. [We like the common, cheap railroad barrow very much, and besides would add to these necessary implements the *weeding fork* which becomes indispensable to whoever once uses it.—ED.]

THE HOT-BED.—To raise early vegetables, it is necessary to bring forward some varieties in a hot-bed. The aim is to afford artificial heat to plants before the ground is thawed or warmed up in the Spring. This is done by the fermentation of manure beneath them, while they receive the light and heat of the sun, the cold being excluded by the frame and glass. Dig a pit running east and west, 18 inches deep, 5 feet wide, and 12 feet long. Make a frame of inch-and-a-half stuff, spruce or pine, to fit within the pit, and about 2 feet above the ground on the north or rear side, and one foot in the front, and make all tight by battening. The sash should be of clear pine, 6 feet in length, and wide enough to contain three rows of 7 by 9 glass. The sides, ends, and middle pieces of the sash should be strong enough to prevent springing apart in the middle and thus allowing the lights to drop out. The glass should lap about ¼ inch, and be well puttied. The bed should be started about the first of March. Use horse manure, pretty full of litter, and slightly fermented. Fork it over several times, to break up the lumps, and mix the coarser and finer manure well together. Make the bed regular and level, beating it down with the back of the fork, leaving the manure about 20 inches deep. Put on the glass and wait two or three days until the manure has commenced heating, then spread the loam evenly over the surface, 4 or 5 inches deep. It should have been procured the Fall previous, sifted through a fine sieve, 13 holes to the inch—9 to the square inch.—ED.] and covered with straw so as to be ready for use before the ground is thawed. After putting on the loam, wait until it is warmed through before sowing the seeds. Nail narrow strips of boards on the inside of the front and back, just above the loam, to support a plank to sustain the gardener while sowing and weeding. The hot-bed needs close attention until the plants are all transplanted into the open grounds. In cold freezing weather it will need covering with mats or straw; in warm sunny days it will want airing; at all times it will require frequent waterings with tepid water. Always water at the close of the day, otherwise too much of the water will evaporate.

Cabbage, cauliflower, egg-plants, lettuce, peppers, and tomatoes may be sown quite thickly in the rows, which should be 3 inches apart; when the plants are 2 inches in hight, they should be thinned to 3 inches in the row. To forward tomatoes to be transplanted, cut sods 6 inches square and 4 inches thick, and place them in the pit, in an inverted position directly upon the manure. Set a small stick in the center of each sod to guide you in transplanting, and sow upon each sod about a dozen seeds, but not within an inch of the edge. Spread fine loam evenly over the seeds about ¾ of an inch in thickness, and press it down gently. After the plants have put out their first *rough* leaves, thin to four in a sod, keep well watered, and transplant when cold weather is past—say middle of May in latitude of New-York City. Too great heat, like the crowding of the plants, has the tendency to draw up the plants and make them spindling and weak; hence always have good ventilation when it is warm.

LAYING OUT THE GARDEN.—If the garden is to be for vegetables *exclusively*—with another plot devoted to fruits—I would leave a border about four feet wide around the outside of the fence, and inside of this I would have a good broad, permanent walk, and another broad walk running lengthwise through the middle of the garden. I would lay off the portion to be devoted to beds in plots about two rods wide—a convenient length for the rows—and divide them by narrow, temporary paths. In making walks, do not sink them below the surface of the beds, as they would be disagreeable promenades after a rain, but rather raise them in the center. Select a plot in the warmest part of the garden for those perennial plants that are not to be disturbed yearly by the plow—such as asparagus, rhubarb, etc., etc. Biennial plants will also find a genial place in the sheltered border.

ASPARAGUS.—The *Giant* is the standard sort. Sow the seed very early in Spring, in drills 1½ inches deep, and 15 inches apart; cover and roll. When well started thin to 3 inches apart. Run the shuffle-hoe frequently between the rows, and weed by hand often. In soil prepared and manured as previously directed, the roots will be large enough to transplant when one year old. Early in the Spring, measure off 24 feet in one of the 2 rod wide plots, and dig a trench of manure, and about 9 pounds of salt. Lay it off in four beds, four feet wide, separated by paths two feet in width. Mark out with your line two rows in each bed, leaving two feet between the rows, and cut trenches six inches deep, one spade wide. Carefully take up the roots, set them in the trenches 15 inches apart, and cover them so that the crowns shall be 4 inches below the surface of the beds. Keep the bed free from weeds, and early in November cut down the stems, rake them off, and cover the beds about 3 inches deep with stable manure. In the following Spring dig in the manure as deep as you can without disturbing the roots, and repeat the operations of the previous year. As the asparagus comes up this third season, cut a portion of the larger and more tender stalks for the table, when they are from 6 to 10 inches high. In the latitude of New-York City asparagus can be enjoyed from about the 20th of April until the middle of June. Market gardeners cut off the stalks three or four inches below the earth, but the blanched part is rejected in eating.

BEANS.—*Dwarf or Snap.*—Desirable standard varieties are: Early Valentine, Yellow Six Weeks, Mohawk, Royal Dwarf, or White Kidney, and Early Marrowfat. About the 20th of April, sow the first three in the list, and about every two weeks thereafter until middle of June. The last two may be sown from first to middle of June for Fall and Winter use. Plant in drills two inches deep and 18 inches apart. To keep down the weeds use the shuffle-hoe freely, and draw a little dirt around the plants once or twice with the common hoe.

POLE OR RUNNING BEANS.—The desirable sorts are: Large White Lima, Dutch Case Knife, White Cranberry, Scarlet Runners. Plant in hills three feet apart both ways, set poles about 8 feet long firmly in the ground, plant from 4 to 6 beans in a hill early in May and cover about two inches deep. When the vines have run about six feet high, pinch off the ends to promote ripening of beans. Keep soil mellow and clean, draw a little dirt around the plants two or three times during the season.

BEETS.—Desirable sorts are: for the table, Extra Early Turnip (or Early Bassano.) Early Blood Turnip, Long Blood. They require a deep, rich soil. Sow in drills nine inch deep, rows eighteen inches apart, and thin out to six inches. Stir the soil frequently, and occasionally pretty deep. Sow the turnip-rooted varieties as early as possible, and the long blood for Fall and Winter use, the latter part of Spring. They may be preserved through the Winter packed in barrels or boxes with dry sand or soil.

BROCCOLI.—The standard sorts are: Early White, Early Purple, Early Walcheren, Early Purple Cape, of which the last is the most desirable. Sow first of April, in shallow drills eleven inches apart. Transplant in June and July, two feet each way. Cultivate like cabbages and commence using in October. BRUSSELS SPROUTS.—Treat every way like the foregoing. Not good until touched by frost, after which they make good greens.

CABBAGE.—Desirable sorts are: Early York, Winningstadt, Large Early York, Early Ox Heart, Early Dutch, Large Flat Dutch, Green Globe Savoy, and Red Dutch for pickling. If very early cabbages are desired, the Early York may be sown *early in September* in drills three inches apart, rows six feet long. Keep them weeded clean, and just before the ground freezes up, thin them to three inches apart in the row, and surround the bed with a frame six inches high in front and about fifteen inches in the rear so as to carry off the water. Cover over with boards, and in mild weather remove the boards in the middle of the day to air the plants. In very cold weather cover with straw, (or straw mats) being careful to remove the covering as it moderates. So soon as all danger of *hard freezing* is over, transplant into the open ground in rows eighteen inches both ways. They may also be much forwarded by sowing in hot-beds early in March. Keep up a pretty high temperature, water lightly, but often: air in the middle of sunny days. They will be ready to plant out soon after the middle of April, and fit for the table by the latter end of June, some two to three weeks later than those wintered over. Sow the later sorts the latter part of April, in a rich bed, rows eleven inches apart, and thin to three inches. Keep them clean; stir the soil with shuffle-hoe, and there should be strong plants before the middle of June. Select the larger ones to transplant first, and the smaller ones will come in for the Winter supply. Transplant in rows, two and a half feet each way, and stir the ground about once a week until the cabbages head. Do not hill up around the cabbage, but keep the ground level and stir often, and they will not be much affected by severest drouths. A few hours before commencing operations, thoroughly saturate the seed-bed with water, so that the ground is soaked as deep as the roots extend. The plants may each be taken up with a garden trowel, and a ball of earth three inches across the top, removed with them. If set in holes corresponding, and the earth pressed firmly around the balls, the plants will not be much checked by the removal. Where practicable, a cloudy day should be selected for transplanting. When it is not convenient to remove a ball of earth with the plants, they should be "dibbled" in with the *finger*, and the soil pressed close around the roots.

WINTERING CABBAGE.—A few may be kept in the house-cellar, but the better way is to build a light cellar under the barn, or carriage-house for storing the greater share of the vegetables, whether for family use, or stock feeding. In the absence of a barn cellar, a permanent out-door pit may be cheaply constructed by digging a pit in a dry place, twenty feet long, three wide, and two deep. Throw the dirt a little back from the edge, set posts about eight feet long, two feet in the ground, in the middle of each end, and also in the center of the pit. Lay a good stiff ridge pole on the top of the posts, and pin it fast. Take slabs long enough to reach from edge of pit to ridge pole and make a roof. Cover the slabs with about six inches of dirt digging a trench around the outside, and beating the earth roof smooth and hard with back of shovel so that it will shed rain. Make a door in each end of the pit to ventilate it in mild weather. Pull up your cabbages and store them in, heads down, two layers deep. You can stow away two hundred large cabbages in a pit of the above dimensions, and take them out whenever desired. In the very coldest weather a few bundles of straw set against the

doors may be necessary to keep out the frost. For Spring use, dig a trench in a dry place, one foot wide, and as many feet in length as you wish to bury cabbages. Lay a couple of rails, or poles along the bottom, place in the cabbage, heads down, and cover with dirt, stems and all. They come out when the ground thaws, fresh and green.

CARROTS.—Desirable kinds: Early Horn, Long Orange, Altringham, Long White. [The first two are best for the table.—ED.] Sow Early Horn, first of April for early crop, and latter part of July for late crop. For main crop, sow in May of the other sorts, in rows eleven inches apart. Thin to three or four inches in the row and keep a close lookout for weeds. Just before the ground freezes, take a sharp spade or hoe and cut off the tops half an inch above the crowns, and dig with spading fork. Preserve a few for winter use, as a recommended for beets, and bury the rest in pits. They are excellent food for horses and milch cows.

CAULIFLOWERS.—Desirable sorts: Large Early London, Large Late London—the former for early use, the latter for late crop. Thorburn's Nonpareil is a good early sort, quite inclined to head, and "Lenormands" is of the same description. The culture is the same as cabbage, taking a little more pains, and you will be repaid with a more delicate luxury. They do not head as certainly as cabbage, but frequent hoeings will promote healing.

CELERY.—The standard sorts are: Early White Solid, Giant White Solid, Red Solid. Sow early in Spring in a rich seed bed. Water frequently and protect from frosts. Thin out plants to three inches. The latter part of July dig trenches one foot deep, and same in width, put in the bottom about three inches of cow or hog manure. Mix it well with soil, and set your plants nine inches apart in the trenches. When the plants are six inches high commence to earth up so as to blanch them. Be careful not to get the dirt into the centers of the plants. Continue to earth up at intervals of two or three weeks, and when the celery has completed its growth, draw up the earth almost to the top of the plants. It may be preserved for Winter use by standing in a box with layers of dry soil between.

CORN (SWEET).—Desirable sorts are: Darling's Early Sugar, Excelsior Sugar, Burr's New Sugar, Stowell's Evergreen. Plant early in May, in rich, mellow soil, three feet each way, stir the ground frequently, and make broad flat hills. (Plant once or twice in May and then about once a week until the fourth of July, to have a succession till frost comes.—ED.)

CUCUMBERS.—Good varieties: Early Short Green, Early White Spine, Green Cluster, and Long Green. For open culture plant early in May in hills four feet each way, slightly elevated. Look out in the early morning for the striped bug, and large squash bug, killing all you find, or you may lose your crop. When they have well the start of the bugs, thin out to four plants in a hill. If they are inclined to run together, pinch off ends of vines. When the cucumbers are of suitable size for use, take them from the vines, leaving none to ripen, as they will continue in bearing longer by such a course. A later planting may be made for pickles.

EGG PLANT.—The varieties are: Long Purple, Large Purple, White and Scarlet Chinese. The first two for use. Sow early in the hot-bed, and when the weather is warm transplant into rows two feet apart, one foot in the row. [In warm soils and locations they will generally fruit, if sown early in the open ground, but earlier started plants are best. ED.]

LETTUCE.—Desirable kinds are: Early Curled Silesian, Ice Drumhead, Butter, Brown Dutch, Victoria Cabbage, White Cos [and Large Indian.—ED.]. For earliest, sow in hot-bed early in March, Curled Silesian, or Butter; transplant early in April into rows eleven inches apart, four inches in rows. For succession, sow in open ground once a month. Frequent hoeings will promote a rapid growth upon which depends its tenderness and goodness.

MELONS.—*Musk Melons.*—The desirable sorts are: Fine Nutmeg, Green Citron and Jenny Lind; the latter is earliest, the former two best. About the middle of May lay out the hills four feet each way; with a shovel take out one foot square of soil six inches deep; with a digging fork dig in some horse manure; draw on the soil again so as to elevate the hill some two inches above the level, sow at least a dozen seeds to a hill, and when they have put forth their rough leaves, thin to four plants. To repel striped bug, mix guano and plaster in equal quantities, dust the foliage of the vines while the dew is on with the mixture, and as it becomes washed off and the bugs return, repeat the operation.

WATER MELONS.—The Early Mountain Sprout, Black Spanish, Ice Cream and Orange are all good varieties, ripening about in the order of the list. Give about the same culture as for musk melons, only put the hills six feet apart each way. They like a light sandy soil enriched by manure.

NASTURTIUMS.—There are large and dwarf varieties, the latter more for ornament than for use. Sow in latter part of May or early June, in drills 2½ feet apart, cover an inch deep; thin to eight inches. The tall kind must have brush, poles, rough stone walls, or something else to run on.

OKRA.—Improved Dwarf Green, Long Green. Plant in latter part of May, in drills three feet apart, and thin to one foot. The pods are used for soups while green and tender, or sliced and dried for Winter use. [This makes a most excellent, rich soup, and should be more generally cultivated. ED.]

ONIONS.—Desirable sorts: Large Red, Yellow Dutch, White Portugal, Potato, and Top Onions. The ground should be rich, and free as possible from weeds. Sow early in Spring in drills eleven inches apart. [Several years on the same ground.—ED.] Cover half an inch, and roll down well. Keep down weeds by frequent use of the shuffle-hoe, and hand weeding. For early use, I prefer the Potato Onion to all others. Plant in September, or early Spring, in rows fifteen inches apart, 8 inches in the row. They will be ripe early in July.

PARSNEPS.—Varieties: Guernsey or Cup, Long White. [Add Hollow crowned as best for the table.—ED.] When the ground is fully warm, sow in drills fifteen inches apart, cover lightly, and thin to three inches apart. Before the ground freezes, take up what are desired for Winter use and pack in a box with dry dirt. The rest will keep well in the ground until Spring.

PEAS.—Desirable sorts are: Princesse, Dan'l O'Rourke,* Tom Thumb, Warwick,* Prolific or Strawberry, Champion of England,* Blue Imperial, White Marrowfat.* (Those with a star require bushing.) It is considered quite a desideratum to get green peas as early as possible. Princesse and Daniel O'Rourke are the earliest. Prolific or Strawberry is but little behind them. Sow those which do not require bushing, in rows three feet apart; cover two-and-a-half inches deep. The others want to be four feet. Witch Hazel makes a good durable bushing, and should be trimmed up fan-shaped. Peas should be sown as early as possible on a light, dry soil. A little poudrette strown in the drill will hasten their growth. When up, loosen the earth on either side of the row with the shuffle-hoe. When a little larger, draw a little dirt to the row, and stir the soil frequently until they are in bloom.

PEPPERS.—Best varieties: Cherry, Large Squash, Long Cayenne, Large Bell. [Bull nose and Sweet Mountain.] Sow in hot-bed early in April, or in open ground a month later. Transplant latter part of May 18 inches each way.

POTATOES.—Desirable sorts: Early Sovereign, Dykeman, Mercer, Peach Blow. Potatoes should be planted in April, to ripen before the heavy Fall rains which increase the chances of rot on rich land. A dry sandy loam, if rich enough, is the best for potatoes. A teaspoonful of ashes on the hill just as they appear above ground is beneficial on most soils. Plant in hills three feet each way and four inches below the level. Stir the surface two or three times, and just before the vines fall over, hoe them for the last time, making low, broad, flat hills. When the tubers are grown enough to crack open when boiled, they will do to commence upon. When the vines are fully dead, dig them with the spading fork, and store them in a dry, cool, dark room, until there is danger of freezing, then remove to a frost proof cellar.

SWEET POTATOES.—Lay the smaller tubers on the manure in a moderate hot-bed, middle of April. Mark out rows three feet apart, scatter horse manure along the marks, cover about six inches with dirt, and early in June break off the sprouts from the tubers and set them out one foot apart.

PUMPKINS.—Standard sorts are: Large Cheese, Connecticut Field, Cashaw. If planted in the garden, they should not be in the vicinity of squashes, melons, or cucumbers, or they will mix. Plant in hills eight feet each way, and cultivate as Melons.

RADISHES.—The best varieties are: Early Frame, Early Long Scarlet, Short Top, Early Scarlet Turnip, Long White Naples, White Turnip, Black Spanish, White Spanish. The first three are desirable for early use, the next two for Summer, and the last two for winter use. Sow as early as possible in Spring on light sandy soil, warmed up by manure, and for a succession once in two weeks through the season.

RHUBARB.—Varieties: Linnæus, Prince Albert, Victoria. Sow in drills, fifteen inches, one inch deep. Transplant in Fall or early Spring three feet each way. Cover lightly with fine manure every Fall. Rhubarb can be forwarded very much in Spring by placing a headless barrel over the hill, and surrounding it with warm manure two feet high. In cutting for use, always leave several stalks in each hill to maintain the vigor of the root. Seed stalks should be cut out as soon as they appear.

SALSAFY OR OYSTER PLANT.—Sow in drills eleven inches apart, half an inch deep, and thin to four inches. Cultivate like the parsnep. Leave in the ground over Winter.

SPINACH.—Varieties: Round Leaved, and Prickly for Winter. For early Spring use, sow in August and Sep tember. Scatter a little straw over the leaves and be tween rows, on approach of Winter. Sow early in Spring for Summer use, in drills fifteen inches apart, half an inch deep, and thin to six inches. When the outer leaves are two or three inches broad, gather for use, leaving the inner ones to continue their growth.

SQUASHES.—The best varieties are: Early Golden Bush, Early Green Striped Bush, Early White Scallop Bush, Summer Crookneck, for Summer; and for Winter, the Hubbard, Winter Crookneck, Boston Marrow, and Folk. The White Leghorn, Mammoth Cuba, and Honolulu, are new and promising, especially the latter. Plant early in May, the bush varieties four feet each way, the others six feet, and cultivate same as cucumbers. Use the Summer kinds before the skin becomes hard.

TOMATOES.—Desirable sorts: Large Smooth Red, Large Yellow, Red Cherry, Yellow Cherry—the latter two for pickling. The Fejee Island Tomato is newly introduced—a large, round, solid tomato, of a pale red color, a little late, and I think, slightly deficient in flavor. It is a great object to grow tomatoes as early as possible, so as to prolong their season. Sow in a warm hot-bed about the middle of March, in rows three inches apart, and thin to three inches in a row. If the plants are inclined to grow too spindling, give them plenty of air. If likely to get too high before the weather will admit of setting them out, transplant them in the same bed. When danger of frost or cold winds is passed, prepare the ground moderately rich, mark out the rows four feet each way. Transplant with care, removing a ball of earth with the roots, and set the plants two inches deeper than they stood in hot-bed. A few plants should be kept in reserve to supply the places of such as may fail, or be destroyed. They should receive frequent hoeings each time, drawing a little dirt around them, forming a broad hill. As the fruit begins to set, pinch off the ends of leading branches so as to hasten the maturing of fruit. Repeat this operation often, or the fruit will become too much shaded. Tomatoes managed as above, will ripen in the latitude of New-York, before the middle of July, on ordinary soils. As they are seldom destroyed by frost before the first of October, the season may extend more than two and-a-half months. Then, if taken when most plenty, and put up in glass bottles from which the air is excluded, they may be enjoyed the year round.

TURNIPS.—Desirable kinds for the table are: Early Dutch, and Red Top Strap Leaf, for early; Yellow Aberdeen, and Rutabaga for late Winter and Spring. For early use, sow as early as possible in Spring. For later, sow Rutabagas in July, and Yellow Aberdeen in August. The rutabagas should be in drills two feet apart, and covered half an inch, the others fifteen inches apart. Slight frosts will not materially injure them, but they should not be exposed to hard freezing.

I believe that I have now enumerated many of the most valuable varieties of vegetables that it is desirable to cultivate in an ordinary Family Vegetable Garden. The gardener should be ever vigilant; should not allow the weeds to get the start of him, nor the insects to destroy his tender vines and plants before he is aware of it. He should do all of his work in a neat, and systematic manner, have his rows and paths straight, and his curves true and regular, and then he will delight to view his garden himself, and have others to visit it. He should keep his tools carefully housed when not in use, and have them cleaned after using, so that they may remain bright and last longer. The very best implements are always cheapest in the end, although the first cost may be greater.

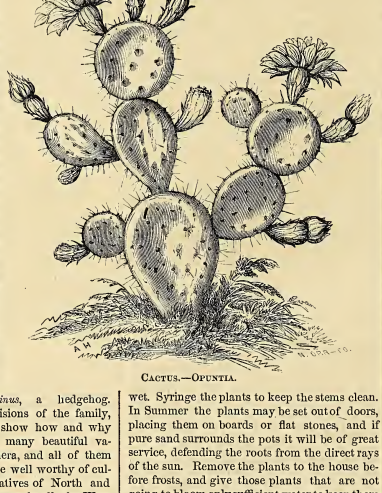
GARDEN SEEDS FOR AN ORDINARY FAMILY.

4 oz. Asparagus.	4. oz. Watermelons.
4 qts. Beans, in variety.	½ oz. Okra.
8 oz. Beets, in variety.	2. oz. Onions.
¼ oz. Broccoli.	2 bus. Potato Onions.
¼ oz. Brussels Sprouts.	1 oz. Parsneps.
½ oz. Cauliflower.	1 oz. Peppers.
4 oz. Cabbage, in variety.	8 qts. Peas, in variety.
1 oz. Carrots.	1 oz. Pumpkin.
½ oz. Celery.	8 oz. Radish.
2 qts. Sugar Corn, in variety.	½ oz. Salsafy.
2 oz. Cucumbers.	2 oz. Squash.
½ oz. Egg Plant.	8 oz. Spinach.
1 oz. Lettuce, in variety.	2 oz. Tomatoes.
2 oz. Muskmelons.	2 oz. Turnips, in variety

All kinds of seed should be sown quite thickly, as quite a proportion of the best often prove poor, and another portion will be destroyed by insects, while if too many are spared, it will be very easy to pull up the excess.

The Cactus—Good for the House.

This family of succulent plants is remarkable for tenacity of life—so great in some varieties that they retain vitality for years in a hot, dry atmosphere without receiving a particle of moisture except that absorbed from the atmosphere. This tenacity of life is owing to their peculiar structure, which allows them to exhale moisture but very slowly, for they have no proper leaves. We know of no other tribe of plants so peculiarly adapted to growing in rooms, or which repays so abundantly the little care required in the culture. It is to be regretted that so little attention is paid to this beautiful and interesting class of plants, because they are so easily cultivated and are not impatient of occasional neglect. The species and varieties are very numerous, amounting in all to several hundreds. The cactus family is divided into several genera, such as the *Opuntia* (of the general form and growth of which our engraving gives a good representation,) *Mammillaria*, called the ball cactus, having spines clustered around a small tubercle; *Cereus*, having for the most part long pliant shoots; *Epiphyllum* with stems resembling leaves; *Melocactus* resembling melons; *Rhipsalis*, most of the species having flexible stems, like (*rhips*) willow twigs; *Echinocactus* named on account of the prevailing form, from *echinus*, a hedgehog. There are still other divisions of the family, but these are sufficient to show how and why it is divided. There are many beautiful varieties in each of these genera, and all of them are so curious that they are well worthy of cultivation. The cacti are natives of North and South America, as well as nearly all the West India Islands. They are mostly very impatient of frost, the least freezing generally destroying them. There are, however, a few hardy species, of which one of the most common is found very plentifully among the highlands along the Hudson River, and Long Island Sound. It is commonly called the Prickly Pear, and belongs to the genus *Opuntia*. Its flowers are yellow, like most others of this class. Though the cactus will grow in nearly pure sand, it does best on good soil. A good compost is equal parts of rich loam, decomposed cow manure, and white sand. Mix these well together and keep in a dry place, always ready for use. The main points are to allow a period of growth and a period of rest, according as nearly as possible with the nature and habits of the plants. When growing water well, and but little when at rest. For all practical purposes the cacti may be divided into two classes—Winter blooming and Summer blooming. Of course the time of flowering may be somewhat varied by culture, but it is best to follow the natural tendency of the plant. Those who can had better purchase their plants while in bloom, unless they are acquainted with the varieties. As soon as the plants have done flowering take them out of the pots and crumble off half an inch or so of the soil all around the ball adhering to the roots; then put them into pots about one inch larger than those from which they were taken, putting in plenty of pieces of broken bricks or pots in the bottom for drainage. Give them a little water, just enough to settle the soil around the roots and water them not more than once a week thereafter. Place them in a warm situation where they will receive plenty of light and when the plants begin to grow, water them twice a week, or often enough to keep the soil moist but not



CACTUS.—OPUNTIA.

wet. Syringe the plants to keep the stems clean. In Summer the plants may be set out of doors, placing them on boards or flat stones, and if pure sand surrounds the pots it will be of great service, defending the roots from the direct rays of the sun. Remove the plants to the house before frosts, and give those plants that are not going to bloom only sufficient water to keep them from shriveling. Those that show signs of blooming (a reddish tint seen around their buds) should have a regular supply of water. The necessary temperature of the room is from 60° to 75°, or it may be even warmer, but make no sudden transitions from heat to cold, or the buds will blight. The wants and habits of the plant will be readily learned by observation.

When cuttings are taken off they should be placed on a shelf in a dry place and left there for one or two weeks before potting them; this causes them to loose part of their watery substance and they root more readily. Put them in soil composed of at least half sand, and give them but very little water until they are rooted.

A Hint to Pear Growers.

Theories and rules are all very well, in their time and place. But just now, we have a *fact* or two for young pear-cultivators. Having noticed that a certain plain and quiet man, year after year brought very handsome pears to the County Exhibition, while many others brought poor fruit or none, we resolved to visit him and see how this thing was done. On asking to see his pear-trees, he smiled, and said he couldn't make much of a show. He led us to a square patch of ground adjoining his vegetable garden, where were just twenty-five trees, all of them on the quince-stock. A few things were visible at a glance. *First*, the wood was healthy and vigorous; the bark was clear of insects, and the foliage a bright green. *Second*, the trees had been well trained from the start. The lower branches shot out at about eighteen inches from the ground, and they were the largest and strongest of all. The other tiers of branches tapered gradually to a point at the top, the whole tree forming a pyramid, like a handsome fir-tree.

Very well, so far. But what means this flooring of straw spread all over the ground? "That's my summer mulch, sir; my soil is rather sandy, and is apt to suffer from drouth in mid-summer; so I cover it with this light, porous blanket. This straw is bright and clean, so it don't bring in vermin nor seeds of weeds; and then, it is so light and open, it does not prevent free circulation of air and moisture about the roots of the trees. I got this idea from Mr. Charles Downing, who is the father of many good ideas."

On a little closer examination, we found that the straw was laid about six inches thick over the entire fruit-garden, paths and all. Our friend said he spread it on in the month of June, just after the ground had received its Spring dressing and cleaning. When once down, it saved the labor of any further hoeing until the middle of September, when it was removed to allow the young wood plenty of time to ripen up hard and bright before Winter. If left on through the Winter, it was quite sure to harbor mice. Just before cold weather set in, our friend was in the habit of winding a thin straw band around the trunks of his trees. He thought this would prevent sudden thawing of the bark after hard freezing. In Autumn, he gave each tree half a bushel of half-rotted manure, spreading it as far as the limbs extended over the ground.

The foregoing was the whole of his secret method of raising regular and handsome crops of pears on the quince stock. The labor of putting down the straw and gathering it up, was much less, he assured us, than the cultivation of the ground would be, if not mulched.

What Grapes shall I Plant?

This is the question which just now occupies the thoughts of fruit-culturists perhaps more than any other. It comes to us from the North and South, the East and West. We can not put it by, if we would; so here is our reply: But our answer, to be intelligent and useful, must depend altogether upon the circumstances of the inquirer, where he lives, and whether he wants to raise grapes for the table, or for wine.

1. If one lives north of latitude 43°, and wishes to dabble in wine-making, we fear he will not make a very marketable article. Southern France, and even southern Ohio will excel him. But the best grapes to try with, are the *Delaware* and *Clinton*. And then, for the dessert, leave out the *Clinton*, and add the following: *Hartford Prolific*, *Concord*, and *Logan*. If one does not live north of lat. 43°, he may, in some seasons, ripen the *Diana* and *Rebecca*, provided he gives them a warm exposure. With the *Isabella* and *Catawba*, it would be useless to meddle. For a select list of four under this head, we would say, plant *Delaware*, *Concord*, *Hartford Prolific*, and *Logan*.

2. If living south of lat. 43°, and above 40°,

the two sorts first named above must still be the wine-grapes. In certain favored localities in this district, the *Catawba* ripens sufficiently well to make a fair sort of wine, but the Summers are hardly long enough to give the clusters all the saccharine and other accompanying elements, needful to make a fair article. Sweetness may be added, it is true, by putting in sugar, but this destroys the purity and delicacy of the flavor, and leaves us only a pleasant (?) kind of cordial. The *Delaware* and *Clinton* ripen well throughout this belt of country, and make very fair wines. For the table, the assortment of grapes is quite extensive, affording, beside those already named, such as the following: *To Kalon, Union Village, Cuyahoga, Allen's Hybrid*, and perhaps others. For a select list of four, we would name: *Delaware, Rebecca, Diana, Isabella.*

3. South of the above, the range of selection widens. There, the *Catawba* yet rules supreme as the leading wine grape; though many of the western vinters are beginning to introduce the *Delaware*, and think that in time it will almost supersede the *Catawba*. A select list of six for the table would include the following: *Delaware, Catawba, Rebecca, Diana, Isabella* and *To Kalon.* For some, the *Concord* would be put in this list, on account of its large, showy clusters, its earliness and hardiness, but it is *second* in *quality.*

4. In addition to the foregoing, if any one wishes to experiment with some of the newer kinds which promise well, we would advise him to plant the *Crevelling, Roger's Hybrid No.* 15, the *Adirondac*, and the *Woodward.* There are other new seedlings soon to be brought out, of which we shall know and speak more at a future time.

The Man and his House in Keeping.

The principle of suggestion has a very wide range. A man's dress and his house are apt to be in keeping with himself; the furniture is, or should be, in keeping with the house, and the garden, grounds, etc., in harmony with the dwelling.

Happening to express some ideas like the above in a mixed company, lately, a little dapper, pinched up man who overheard, began to banter us, and said rather smartly, "Pray sir, what sort of a house do *I* suggest? what sort, ha?" Eyeing him a moment, we said, "You suggest a little, narrow, pinched up, Gothic cottage, made of very thin clapboards, and painted in a very spruce manner." He turned away. "And what sort of a building do you put down for me?" inquired a square, plain, commonsense man. "You suggest a plain, solid, unpretending house, with a white fence all around it, and a row of maple trees in front."

Probably the reader now gets one idea, and we beg him to dwell upon it a little. Whenever a man builds a house, let him not look around and inquire about 'Squire Jones' Grecian mansion with its Corinthian pillars, or Judge Brown's English villa, or Dr. Smith's French chateau. Rather, let him sit down and consider, first, what his own wants and comforts require in a house; and secondly, how much he can allow for ornament, and what will be in keeping with his character, position, and tastes. His house should express himself, should be a sort of natural outgrowth and flower of his mind and character and means, so much so, that people will say, as they pass by: "Well, that's just like him; it's natural—in keeping with the man." And let this appear in the man's furniture, books, dress, and the ordinary surroundings of his dwelling. His trees and fences and walks should show it. Aye, they *will* show the man, whether he will or no.—Who will build us a model farm-house, one which happily expresses the true idea of life in the country and on the farm? Not smart and showy and uncomfortably fine. Not covered with gimcracks, or built in imitation of some fashionable city house. Rather, let it be plain, solid, roomy, with the idea of repose and comfort written all over it, and penetrating it through and through. Give it an air of dignity, earnestness, sincerity, and open-handed hospitality. Give it, above all, a home-like look. Of course, the appendages of barns, woodhouse, sheds, etc., should be in keeping with the main building. The grounds should be ample, neat but not overnice, and the trees for shade should be few and massive, not over-crowded. We see, now and then, some approaches to this sort of building, but the complete expression of our idea is yet to be made. Let our readers look into the vein we have struck; it is worth working out further.

Home Ornaments—Skeletonizing Plants.

This beautiful art is now brought to such extraordinary perfection, as to give one almost an impression of a new creation, not of art but of nature; and it is indeed nature. Our commonest leafy forms, stripped of the green tissue which constitutes their principal substance, are preserved as delicate white skeletons, retaining perfectly the form of the leaf, with its most intricate, reticulated net-work of veins and fibers, and may be grouped or arranged in bouquets according to the dictates of taste or fancy. Thus it not only furnishes amusement and beautiful ornaments, but it is also very instructive to those who take an interest in the hidden beauties of the vegetable kingdom. When a leaf has been reduced to a skeleton, its net-work of nerves and veins is spread out before us, and we are enabled to study the various ramifications of its vascular system. Nature pointed out the way, but man was slow to follow in this instance, as he is in many others, for doubtless the ancients must have observed leaves that had fallen in damp places, and thereby had their cuticle destroyed, leaving only the skeleton. Yet it appears that they were not artificially prepared until 1645, when Marcus Aurelius Severinus published a figure with a description of the skeleton of a leaf of the *Cactus opuntia.* (See preceeding page.) Although Severinus brought this art prominently before the scientific world, we find no mention of it again until it was revived by Ruysch in 1723. This naturalist first prepared the leaves by employing insects to eat away their pulpy parts just as we often see our rose leaves eaten, but he found that the insects did not always stop when they had eaten out the pulp, but often destroyed the solid parts that he wished to preserve, so he had to discard these anatomists and employ a process similar to the one described on page 117, vol. 19, of the *American Agriculturist.* (See also page 70 of this paper.)—Du Hamel prepared the fruit of the pear in the same manner, illustrations of which were given in the Transactions of the Academy of Science of France in 1730.—Francis Nicholls went still further, for after he had reduced the leaf to a skeleton, he split it in halves, dividing every fiber. The specimens of this art on our exhibition table, from Mr. W. F. Heins, we think will excel anything of the kind that has been produced in years past, for in these he not only skeletonized the leaves, but nearly the whole plant, after which they were bleached to snowy whiteness. They are worth seeing.

Cheap Washes for Buildings, Fences, etc.

Take a large tub, or a common barrel, and slack one bushel of good fresh lime, covering the lime with boiling water. After letting it stand three or four hours, pour on cold water enough to make it as thin as ordinary white-wash. Then take one pound of white vitriol and one quart of fine salt, dissolve them, and pour into the lime water. If a *cream color* is wanted, stir in half a pound of yellow ochre. If a *fawn* color, add to half pound of yellow ochre, a quarter pound of Indian red. If a neat *gray stone* color is desired, take half a pound of French blue, and a quarter pound of Indian red. For a neat *drab*, add half a pound of burnt sienna, and a quarter pound of Venetian red. Other colors can be made to suit one's taste. Every body who has half an eye, (or weak eyes!) sees that either of the above colors is preferable to the glaring *white* which has so long been used on fences and out-buildings. The white vitriol, we may add, seems to harden and fix the color, so that it is not necessary to repeat the white-washing for several years. *

Coffee for the Times.

The present high price of coffee will lead to its less abundant use (not a bad result), and also impel many to adopt some substitute as a "warm drink." Here are two or three suggestions taken at random from the *Agriculturist* "Drawer:" A "Constant Reader," writes: "To 1 lb. of the best unburned coffee, add 3 lbs. of cleaned rye, previously washed, scalded and dried. Burn the whole carefully, and grind fine as wanted for use." The rye will add "body" to the fluid, and afford quite as much nourishment as an equal weight of coffee grains. 2.—The Editor of the Miner's Journal says he has for sometime used a beverage made of a quarter of a pound of coffee, and two quarts of wheat combined. "The wheat is boiled about twenty minutes in water, and then placed in a pan and browned the same as coffee. So far, we prefer it to the genuine article, and it certainly is more healthy. With a pound of coffee and eight quarts of wheat, which costs from 3 to 4 cents a quart, this beverage is produced so cheap that it makes up all the difference in the advance in price, of both tea and coffee."

3. Miss L. E. Palmer, of Luzerne Co., Pa., suggests a return to the old fashioned crust coffee, which has long been used, and is still used in many families as a "warm drink."—It is what the physicians call bread or crust "panada." Miss P. directs as follows: "Brown some stale crusts, or bits of bread, as thoroughly as possible without burning. Place in the coffee pot and pour boiling water over them; they require very little boiling. A coffee cupful of crusts will make two quarts of fluid."

Bouilli, or Pot-au-Feu.—A French National Dish.

The inquiry in onr last has called forth responds from several correspondents who will please accept our thanks. They are somewhat alike, and we have only room for the following—just as written:

1. A condensed translation made for the *Agriculturist* by Mrs. Elizabeth Bagg, from a work by a noted Freuch Chemist (Raspail), entitled "Manuel Annuaire de la Santc," (Annual Manual of Health,) under thc chapter headed "Cuisine Hygienique," or hygieue of the Kitchen: "Choose meat of the best quality that can be procnred, whether beef or mutton. Place your meat in twice its bulk of water, add a handful of salt, and let it boil very gently, removing all the scum. Theu add an onion stuck with three or four cloves, a handful of celery and chervil, three cloves of garlic, a pinch of pepper, a laurel leaf, and a burnt onion, with a very few carrots and turnips. Keep up a gentle ebullition for 3 or 4 honrs. Such a *bouilli* will alone suffice to cure indigestion. To be eaten with toasted bread, or better still, boiled rice or vermicelli, and other Italian pastes."

2. Contributed by S. L. Urmston, Beaver Grove, Ill.: "Take a brown earthen crock—a kettle will answer. Put in 6 lbs. of beef, and 4 quarts of water, sct near the fire, and skim. When nearly boiling, add 1½ spoonfuls of salt, ½ lb. of liver, 2 carrots, 4 turnips, 8 young or 2 old leeks, 1 head of celery, 2 onions, and 1 burnt onion, with a clove in each, and a piece of parsnep. Skim again, and let it simmer 4 or 5 hours, adding a little cold water now and then. Take off part of the fat, put slices of bread into the soup dish; lay half the vegetables over and half the broth, and serve the meat separate with the vegetables aronnd."

3. From a subscriber at Germantown, Pa.: "Two or three pounds of beef from neck or breast, after being well washed, put it in a pot twice the size of the meat, and fill up with cold water; let it simmer at least an hour, skimming all the time. Then add 2 large spoonfuls of salt, 1 large onion in which you will stick 4 cloves, a bunch of greeu onions, celery, chervil, a little garlic, a leaf of the bay laurel tree, 1 large or 2 small carrots, 2 or 3 turnips, a little parsley. A small teaspoonful of brown sugar gives a nice taste and a pretty color to the soup. Let it simmer for 5 honrs; then put in what you please—bread cut up in blocks which you put in just before sending to the table, or boil in the broth tapioca, vermicelli, macaroni or dumplings made quite small. No pepper until on the table.——The above recipe was given by a *Parisienne*, but American cooks can adapt it to American palates." [All the above would need some "*adaptation*" to suit onr taste.—From N. M. Root of Hillsborough Co., N. H., we received a recipe, the same as No. 2, which is accredited to Soyer.—ED.]

To Cook a Beef's Heart.

We stated in the February *Agriculturist*, (page 37) that owing to want of knowledge of the value of beeves' hearts, or of the method of cooking them, the N. Y. City butchers find slow sale for hearts weighing 6 lbs. each, at 10 cents a piece. Several correspondents from the country write that they consider this part of the animal quite a delicacy. The following are some of the directions sent to the *Agriculturist:*

1. "H." of Genesee Co., Mich., says it is excellent cooked thus: "Gash it, and fill it with stuffing, the same as a turkey; then boil it in water enough to cook it, so that when done there will be just enough to form a gravy."

2. J Langdon, Vinton Co., O., recommends (for stuffing we suppose) ¼ lb. beef suet, 1 lb. bread, 3 eggs, a little parsley, nutmeg, pepper, and salt.

3. L. E. Kimberly, Litchfield Co., Conn., writes: "Take the heart and skirts, soak over night in cold water. Boil until tender; when cold, chop all together very fine, and sprinkle in a little salt. When wanted for use, take what will be sufficient for a meal, put it in a frying pan over a slow fire and season with butter, pepper, salt and sage. A little flour and water is thought an improvement by some, as the heart itself is very dry."

4. T. B., near Moorestown, N. J., writes: "Make a good dressing of wheat-bread, pepper, salt, and a little piece of butter; wet it with cream, or milk, (if you have neither cream nor milk, a little water will do); fill the heart with it; skewer it well; put it in a pot with plenty of water, and stew it down so as to make a good gravy. It makes a good and cheap meal; my family think it as good as any part of the beef."

5. S. S. Barstow, of Sullivan Co., N. H., gives the following simple directions: "Boil the heart tender. Then chop, but not as fine as for mince meat; add a little boiling water, a piece of butter, salt, pepper, enough wheat bread crumbs to thicken it a little, and simmer all together. Very palatable."

Note.—A friend at our elbow says a beef's heart is the very best of meat for mince pies. If so, it is strange that our city pie-men have not found it out ere this.—ED.] [Dog-meat is cheaper.—*Printer.*]

Well Tried Recipes for Good Things—but not very Cheap.

Coffee Ice Cream.—Brown 2 gills of coffee; put it hot and nnground into a qnart of sweet rich milk, boil it, adding the yolks of 8 eggs, strain it through a sieve, sweeten and freeze it, giving frequent and thorough agitation. If properly done it will not be discolored.

Light Cake for Breakfast or Tea.—One cup of sugar, 2 eggs, ½ cup of melted butter, 1½ cupfuls milk, 2 teaspoonfuls cream of tartar mixed with the flonr, 1 teaspoonful of soda, flour enough to make a stiff batter. It will bake in 20 minutes if the oven is hot.

Coffee Cake.—One cupful of butter, 1 cupful of sugar, 1 cupful of molasses, 1 cupful of liquid coffee, 1 teaspoonful of soda, 2 teaspoonfuls cream of tartar, flour enough to stiffen it, cloves, cinnamon and nutmeg to taste—add fruit if you please.

Windsor Cake.—Two cupfuls Indian meal, 4 cupfuls flour, 4 cupfuls milk, ½ cupful molasses, 1 teaspoonful of soda, bake in pound cake tins. Half the quantity may be used.

Two Ways of using cold boiled Fish.—(1) Take 2 lbs of cold fish, cut it into very small pieces, scald 1 pint of milk in a sauce pan, mix in enough flour to make a paste, and ½ lb. butter; season with pepper and salt, and then whip in the yolks of 4 eggs, one by one; butter a dish, lay in first a layer of fish, then of the paste, and so on to fill the dish. Bake ¾ hour in moderate oven.

(2) Cut up a fish in convenient pieces, and put in a jar a layer of fish and then spices, (pepper, cloves, allspice and mace to taste,) until the jar is filled; then put in vinegar euough to cover thoroughly. Tie a paper tightly over the jar; then spread a paste of flour and water over the paper, set it in the oven for 8 hours. Blue fish is good, but shad is better. If rightly done, the bones will be entirely absorbed. It is excellent.

Crullers.—Dissolve 1 teaspoonful of saleratus in 4 spoonfuls of milk, or in 3 of milk and 1 of wine; strain it on a tumblerful of flour, adding 4 spoonfuls of melted lard or butter, and a teaspoonful of salt; beat 4 eggs with 7 spoonfuls of rolled sugar; work all together with a grated nutmeg, and add flour to make it roll out easily. Cut out and fry as usual in plenty of hot lard.

Savoy Cake.—Half lb. of fine sugar, ¼ lb. of flour, 4 eggs, half the grated rind and juice of a lemon. Beat the whites of the eggs to a froth, add the sugar gradually; when the oven is ready, stir in the lemon and yolks well beaten; sift in the flour as light as possible; drop by half spoonful on buttered tins. Sift on a little white sugar and bake immediately.

Finale of the Corn Bread Exhibition—Balance of 100 Recipes.

Below we give forty more of the recipes or directions, accompanying the loaves of Corn Bread and Corn Cake, at the recent exhibition at the *Agriculturist* office, with the epitomized notes of the Committee. These will be fonnd not less interesting than those given in our previous two numbers. It is almost remarkable that in all of the hundred recipes published, no two appear to be exactly alike; and the same would be the case, should we give the 120 others which we have on hand. We would be glad to do this, but probably our lady readers generally, will find all they desire in those so far printed, and we can not spare any more room—at present at least. We therefore close the subject, with again returning our thanks to the public spirited ladies, who contributed the works of their fair hands to the enterprise, which, we humbly trust, will be the means of inciting a much greater interest in a subject of so mnch importance as that of promoting the more general use of our own native and abundant cereal crop.

In printing the "Prize Recipes" for Corn Bread, a typographical error occurred, and we reprint two here, in the exact words of the contributors.

34. (1st prize.)—Two quarts meal, one pint light bread sponge, half pint flour, tablespoonful of salt, and warm water sufficient to wet the whole; work well, and let it rise; then work over, put in the pan, let it rise again, bake one hour and a half in a brisk oven; this is good steamed or toasted, at a week old.—Mrs. Jane J. O'Brien, Carrick, Alleghany Co., Pa."

24. (2d prize.)—Mix 2 quarts of new corn meal with 3 pints of warm water; add 1 *teaspoonful* of salt, 2 teaspoonfuls sugar, 1 large *tablespoonful* hop yeast. Let it stand in a warm place 5 hours to rise; then add ¾ pint, or 1½ cupfuls of wheat flour, ½ pint warm water; let it rise again 1½ hours; have a pan well greased with sweet lard, into which pour it, and let it rise a few minutes, then bake in a moderately hot oven 1 hour and 20 minutes. This is much better hot.—Mrs. Lott Cornelius, Locust Valley, Queens Co., L. I." [The chief error in printing this at first was in recommending a tablespoonful of salt, instead of a teaspoonful, a rather important error, to be made by two bits of type-metal.—ED.]

No. 2. Corn Bread with Cost.—By Mrs. Louis C. d'Homergue, Middlesex Co., N. J. One lb. corn meal, 2 c.; 1 lb. wheat flour, 3½ c.; 1 pint rising or yeast, ½ c.; 1 tablespoonful salt, ¼ c.—total 6¼ cts.; scald the meal in 1 quart boiling water, let it get lukewarm; put in rising, knead in the flour; add salt, let it rise; bake 1 hour in moderate oven. (*Com. Notes:* "Cheap; good.")

No. 5. Corn Bread.—By Mrs. H. C. Compton, Essex Co., N. J. One quart corn meal, 1 quart buttermilk, 1 teaspoonful soda, 2 eggs; bake 30 minutes. (*Com. Notes:* "Light, well baked, very white, good.")

No. 14. Molasses Corn Cake.—By Mrs. J. H. Anner, Rockland Co., N. Y. Two cups corn meal, 1 cup wheat flour, 2 cups molasses, 1 cup sweet milk, 1 egg, 1 teaspoonful salt, 1 teaspoonful soda, 2 teaspoonfuls cream tartar, a lump of butter size of egg. Bake 2 hours. (*Com. Notes:* "Very light and good.")

No. 27. Corn Bread.—By Mrs. S. S. Jessup, Harlem, New-York Co., N. Y. Take 1 lb. corn meal; rub into it ½ teaspoonful salt, and 1 teaspoonful soda, 1 egg, and a tablespoonful of lard or drippings; mix with 1½ pints of sour milk; pour the mixture into a buttered pan, and bake ¾ hour. Cost a little less than 5 cents. (*Com. Notes:* "A very good loaf.") No. 28, a wheat and Indian loaf, by the same, was very excellent. Recipe lost, probably taken away by some admirer of the loaf.

No. 40. Corn Meal Bread.—By Mrs. Mary J. Davis, Kent Co., Md. Two gallons warm water, 2 gallons white corn meal, 3 quarts fine wheat bran, (sifted through a corn meal sieve from wheat bran,) 2 tablespoonfuls salt; mix well together; set in a warm place 6 hours in an earthen jar; then stir well again and bake. (*Com. Notes:* "A monster loaf, good quality, wholesome.")

No. 43. Corn Bread.—By Mrs. S. J. Piue, Suffolk Co., N. Y. One and a half pints Indian meal, ½ pint wheat flour, ½ pint good emptyings, and a little salt; add warm skim milk, sufficient to make a batter stiff enough for a spoon to stand in; raise 4 hours; bake ¾ hour in slow oven. (*Com. Notes:* "Well baked, light, very good."

No. 63. Corn Cake.—By Miss E. Merrit, Orange Co., N. Y. One pint sweet milk, 1 pint sour milk, 1 quart corn meal, 1 tablespoonful lard, 3 tablespoonfuls molasses, 1 teaspoonful soda, 1 teaspoonful salt; beat well together, and bake in a quick oven 1½ hours. (*Com. Notes:* "Well baked, and good.")

No. 64. Corn Bread.—By Miss E. Merrit, Orange Co., N. Y. One cup sweet milk, 1 cup sour milk, 4 tablespoonfuls cream, or 1 of butter, 2 tablespoonfuls Graham flour, (flour ground coarsely from good, well cleaned wheat, and not bolted,) 1 teaspoonful soda, 1 teaspoonful salt, Indian meal enough to make stiff batter. Bake 1 hour. (*Com. Notes:* "Light, well baked, a nice loaf.")

No. 68. Indian Loaf.—By Mrs. M. T. Willis, Queens Co., N. Y. One and a half quarts Indian meal, scalded with 1½ pints boiling water, and immediately thinned with 3 pints tepid water; add ⅔ quart unbolted Graham flour, ⅔ quart chopped sweet apples, 1 gill molasses, and 1 spoonful salt. Bake in a hot oven 6 or 8 hours. The apple may be omitted. (*Com. Notes:* "Very good for those who like a *moist* loaf.")

No. 76. Corn Bread.—By Mrs. D. G. Henry, Addison Co., Vt. Two quarts corn meal, 1 quart wheat middlings, 1 cupful molasses, 1 teaspoonful saleratus; mix with 1 pint buttermilk, and cold water enough to make it very soft; bake 4 hours with a moderate fire. Keeps well one week in cool weather. (*Com. Notes:* "A very large loaf. Quality fair. Not quite enough baked.")

No. 80. Corn Loaf.—By Mrs. Ermina Moody. (No address.) Five parts good corn meal, 1 part wheat flour; mix the flour and meal well together; then add 1 cent's worth yeast, ⅓ cup molasses, ½ teaspoonful salt, and warm water enough to make a stiff batter; set to rise in a warm place; when risen sufficiently. bake 2 hours in a moderate oven. I prefer rye to wheat flour. Cost 7¾ cents. (*Com. Notes:* "Well baked, quality good.")

No. 81. Corn Bread.—By Mrs. John Welles, Hartford Co., Conn. One part wheat flour, 5 parts white corn meal, 1 teaspoonful sugar, and one of salt for each loaf; stir well together; wet with warm milk to the consistency of thick batter; raise with common brewer's yeast, using twice the amount as for all flour; bake 1 hour, cool gradually. (*Com. Notes:* "Well baked, light, good.")

No. 82. Corn Cake.—By Mrs. N. Dean. New-York City. 3½ lbs. corn meal, 1 quart molasses, 3 pints boiling water, 1 tablespoonful salt. Mix the corn meal, salt and water; after a thorough stirring, add the molasses, stir again, and bake in a hot oven 2½ hours. (*Com. Notes:* "A large, fine looking loaf, but not quite light enough.")

No. 83. Corn Bread.—By Mrs. H. E. Moseley, Hampden Co., Mass. Two and a half pints corn meal, 1 pint boiling water to scald it, to be cooled after a few moments with ½ pint cold water. To this add 2 large spoonfuls good, lively yeast, 2 of molasses, and 1 teaspoonful fine salt. Mix well, and knead in ½ pint wheat flour. When sufficiently risen, bake 2 hours in a stove oven. (*Com. Notes:* "Well baked, fair quality.")

No. 85. Brown Bread.—By P. Jane Tibbetts, Litchfield Co., Conn. Two and a half pints corn meal, ½ pint wheat flour, 2 spoonfuls molasses, 1 cup sour milk, 1 teaspoonful saleratus; mix with sufficient cold water to make a thin batter; bake in a rather slow oven 5 hours, in a covered tin, the cover overlapping. (*Com. Notes:* "Properly baked. light, good.")

No. 86. Corn Meal Tea Cake.—By Mrs. Eliza Renoud, Fairfield Co., Conn. Two teacups buttermilk, 1 teaspoonful saleratus, 2⅓ cups corn meal, 1 cup molasses, 2 eggs, 2 cups flour, 1 teaspoonful ginger; bake ½ hour. (*Com. Notes:* "Light, well baked, quality fair.")

No. 87. Corn Bread.—By Mrs. Eliza Renoud, Fairfield Co., Conn. Two cups light yeast, made from flour, 1 cup milk and 1 of water, lump of saleratus, size of large pea; stir it up with meal, and let it rise; butter the pan; then stir again, and pour in: when light, bake 1 hour. (*Com. Notes:* "Light, well baked, of good quality.")

No. 88. Wheat and Indian Bread.—By S. B. H. Williams, New-London Co., Conn. Easily made, thus: scald 1 pint corn meal; make thin enough for griddle cakes; add enough cold water to make it lukewarm; then add 3 pints corn meal, and 3 of wheat flour; mix thoroughly about as stiff as common brown bread; bake, according to size of the loaf. 1 hour for this size, and longer for a larger loaf. The material for the loaf sent costs but 2 cents, the above mixture being sufficient for six such (*Com. Notes:* "Not quite light enough, but well tasting, made of good corn, probably freshly ground, which is half the battle.")

No. 89. Corn Bread.—By the same. Contains only 1 part of flour to 5 of corn meal. Made otherwise precisely as No. 88. The contributor says: "If still lighter bread is desired, a little molasses and soda can be added, but we prefer the natural sweet taste of the meal, if the bread is not quite as light." (These loaves, 88 and 89, were decided by the committee, to be not as light as desirable; but they had the pure, unadulterated, delicious taste of corn meal, undisguised by molasses and alkalies—just what unprejudiced tastes love. Who does not smack the lips with pleasure while munching boiled corn from the cob in August? Corn bread, almost as simple, more healthy, and about as finely flavored, can be made.—*Rep.*)

No. 104. Corn Loaf.—By Mrs. J. H. Fullerton, Yorkville, New-York Co., N. Y. Two cups water, blood warm, 2 tablespoonfuls molasses, 2 tablespoonfuls vinegar, 1 teaspoonful salt, 1 teaspoonful lard, ½ cup wheat flour, 1 teaspoonful soda in sufficient water to dissolve it; mix all well together; add 2½ cups corn meal. Bake 1 hour in a quick oven. This recipe makes excellent griddle cakes, with less meal to make a batter. (*Com. Notes:* "Well baked, light, fair.")

No. 106. Corn Meal Bread.—By F. L. Collins, Litchfield Co., Conn. Two lbs. sifted corn meal, 5 oz. wheat flour, stirred into the following ingredients: 1 quart sour milk, 2 teaspoonfuls saleratus, 2 eggs well beaten, 1 tablespoonful brown sugar, butter the size of an egg, 1 teaspoonful salt. The mixture to be about as stiff as for pound cake; bake in a medium heat 1¼ hours. (*Com. Notes:* "Not baked quite enough, otherwise good.")

No. 108. Indian Loaf.—By Mrs. Barnes, Kings Co., N. Y. Five cups corn meal, 1 cup rye flour, 6 cups boiling water, 2 tablespoonfuls molasses, a little salt. Scald the corn meal; let it stand until cool; then add the molasses, rye, and salt; let it stand over night; in the morning bake in a deep pan 3 hours. (*Com Notes:* "Light and good, but rather too much crust formed in baking.")

No. 109. Yellow Corn Bread.—By Mrs. Barnes, Kings Co., N. Y. One quart corn meal, 1 quart boiling water, and a little salt. Mix and bake in a shallow pan 1 to 2 hours. (*Com. Notes:* "Very economical, and pretty good.")

No. 111. Corn Cake.—By Mrs. Barnes, Kings Co., N. Y. Two cups corn meal, 2 cups milk, 2 eggs, 2 tablespoonfuls sugar, ¼ teaspoonful soda, and a little salt. Mix and bake in a shallow pan 1 hour. (*Com. Notes:* "A very good tea cake.")

No. 112. "Little Rhody."—By Mrs. J. E. Macomber, Newport Co., R. I. Two and three quarter lbs. corn meal, 1¼ lbs. rye flour, (being same price as corn meal, and less cost in proportion to the loaf, than if one-sixth of wheat had been used,) 1½ pints sweet milk, 1 quart boiling water. Pour the boiling water upon the corn meal, mixing both together; then put in the milk and rye meal, and mix all together. A moderate oven the first hour; then increase the heat, and let it remain in the oven 4 hours from the first. It is well to bake in the evening, and let it remain in the oven over night. Dish used, an iron kettle, covered. Weight of loaf, 6½ lbs. (*Com. Notes:* "A large, well looking loaf of good, substantial, healthy bread.")

No. 113. "Cousin Rhody."—By Mrs. J. E. Macomber, Newport Co., R. I. One quart boiling water, 2¼ lbs. corn meal, 1 lb. rye meal, 1 pint sweet milk. Mix the boiling water with the corn meal; add the rye meal and milk, mixing all together. Bake 4 hours in a deep tin pan covered. (*Com. Notes:* "A very nice loaf, had it been baked more.")

No. 114. Cheap Corn Meal Bread.—By Mrs. George S. Jacobs, Middlesex Co., Mass. Mix 1½ pints corn meal with 1 teacupful flour; add 2 tablespoonfuls molasses, 1 cupful sour milk, and enough saleratus to remove the acidity; next add sweet milk, if you have it, if not, cold water will answer; mix nearly as soft as you would for soft gingerbread, and add a little salt. Bake from ¾ hour to 1 hour. (*Com. Notes:* "Well baked, light, well tasted."

No. 115. Corn Cake.—By Mrs. Benj. F. Chase, Newport Co., R. I. One pint corn meal, ½ pint wheat flour, 1 pint milk, 3 eggs, 2 teaspoonfuls cream tartar, 1 cup sugar, 1 teaspoonful salt; bake ½ hour. (*Com. Notes:* "Very nice. For breakfast or tea, it would be hard to find anything better.")

No. 116. Corn Bread.—By Mrs. B. F. Chase, Newport Co., R. I. Five pints corn meal, 1 pint rye meal, 1 teacupful molasses, 2 teaspoonfuls salt, 3 pints milk, or water, or both, (enough to form a soft batter.) Put into a tin kettle, with a closely fitting cover, (a tin mould with a hollow, open center is better;) set in a kettle of hot water, and keep it boiling through the day; let it remain in the water over night, and you have a warm loaf for breakfast. (*Com. Notes:* "Good.")

No. 117. Corn Bread.—By Mrs. B. S. Arnold, Providence Co., R. I. One quart corn meal, 1 teacupful flour, 1 teacupful molasses, ½ cupful sugar, 1 teaspoonful saleratus, dissolved in a pint of sour milk, and 1 egg; mix to a stiff batter, and bake 1¾ hours. (*Com. Notes:* "Of fair quality.")

No. 132. Indian Bread.—By Mrs. Wm. Hinton, Kings Co., N. Y. 1¼ lbs. sifted Indian meal, ½ lb. wheat flour (rye will do as well,) 3 ounces lard, 1 gill home made yeast, 2 tablespoonfuls salt; mix the meal and flour; rub in the lard thoroughly; add the yeast and salt, and as much warm water as will make a soft dough; this to be done at bed time; in the morning put it into a pan rubbed with butter, and bake 1 hour. (*Com. Notes:* "Well baked, light, well tasted, but too much salt.")

No. 141. Cup Cake.—Mrs. A. D. Weymouth, Worcester Co., Mass. One quart corn meal, 1 teacupful flour, 1 quart sour milk, 1 tablespoonful molasses, 1½ teaspoonfuls saleratus, 1 teaspoonful salt. I take the milk first; add the meal without scalding; then add the other ingredients, raise thoroughly, and bake 1½ hours. Cost—corn meal 2½c., wheat flour ½c., sour milk 2c., molasses, saleratus, and salt, ½c.—total 5½c. Weight 4 lbs., or 1⅜c. per lb. (*Com. Notes:* "Light and good.")

No. 145. Corn Bread.—By Mrs. J. G. Caldwell, Queens Co., N. Y. Two quarts sifted corn meal; scald the meal, add cold water enough to leave it but milk warm; then add ½ teacupful yeast, a little salt, and ⅓ teacupful rye flour. Stir all together; let it stand over night; in the morning add ½ teacupful molasses, and 1 teaspoonful saleratus; put in a pan, and bake 2 hours. (*Com. Notes:* "Well baked, light, good.")

No. 153. Brown Loaf.—By Mrs. D. S. Wood ward, New-London Co., Conn. Two and a half quarts corn meal, mixed with scalding water until thoroughly wet; when nearly cool, add 1 quart of rye meal, 1 cup of yeast. ⅓ cup molasses; mix thoroughly, and set to rise 1 hour. Bake 3 hours. (*Com. Notes:* "A large, fine looking loaf, not quite well baked, but otherwise good.")

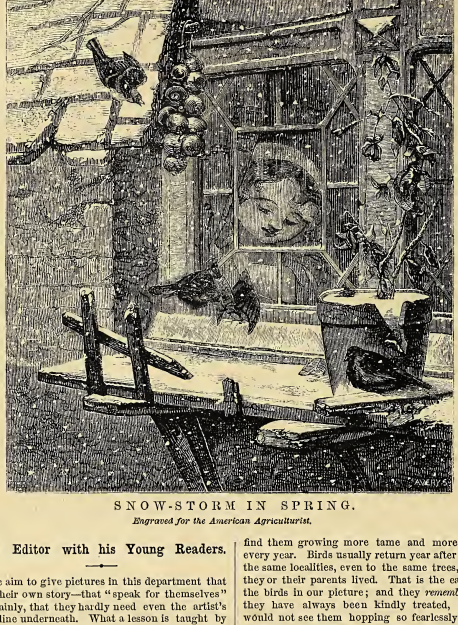
No. 159. Corn Sweet Cake.—By L. E. Palmer, Luzerne Co., Pa. One teacupful of butter and two of sugar, rubbed well together; 5 eggs, whites beaten apart, 1 cup sour milk, 3 cups Indian meal, 2 cups wheat flour, 1 teaspoonful saleratus, and half a nutmeg. Of course it would be better with a larger proportion of flour, but we think it pretty good, made as above. (*Com. Notes:* "Light, well baked, a very good cake.")

No. 187. Corn Bread.—By Arabella Culverwell, Laporte Co.. Ind. One pint sour milk, 1 pint corn meal, 2 tablespoonfuls wheat flour, 1 tablespoonful butter, 2 tablespoonfuls molasses, 1 teaspoonful soda, 1 of salt, 2 eggs. Bake 1 hour. (*Com. Notes:* "Pretty good.")

No. 188. Rye and Indian Bread.—By Mrs. H. Edwards, Allegany Co., N. Y. Three pints corn meal, 1 pint rye meal, sifted through a common sieve; mix with boiling skim milk enough to wet it thoroughly, and stir with a spoon until well mixed; let it stand 1½ to 2 hours, stirring often; add 1 teaspoonful salt; fill 2 iron basins with the dough, turn them together, and put them in the stove, and bake moderately 2 to 3 hours; then leave to cool gradually in the stove. (*Com. Notes:* "A large loaf of very fair quality, and specially economical.")

No. 189. Family Loaf.—By Clarissa Edwards, Allegany Co., N. Y. Two quarts skim milk, scalding hot, 1 tablespoonful salt, 1 quart corn meal, stirred in by handfuls, ⅔ pint rye meal, not bolted, but sifted; after stirring thoroughly, add 1 cup cold milk, stirring smartly; let it stand 10 or 15 minutes, then put into a cast iron basin, cover with another basin; bake not less than 4 hours, 6 is better; can hardly be baked too much, unless burnt. (*Com. Notes:* "A good, wholesome food.")

No. 193. Corn Bread.—By Mrs. D. W. C. George, Worcester Co., Mass. Five cups corn meal, 1 cup flour, ½ cup molasses. 1 teaspoonful saleratus, and 1 teaspoonful salt. Mix soft, and, if the weather is cold, let it stand mixed over night. To avoid hard crust, steam 2½ hours; then put in a moderate oven long enough to dry off and brown a little. (*Com. Notes:* "A fair loaf.")



SNOW-STORM IN SPRING.
Engraved for the American Agriculturist.

The Editor with his Young Readers.

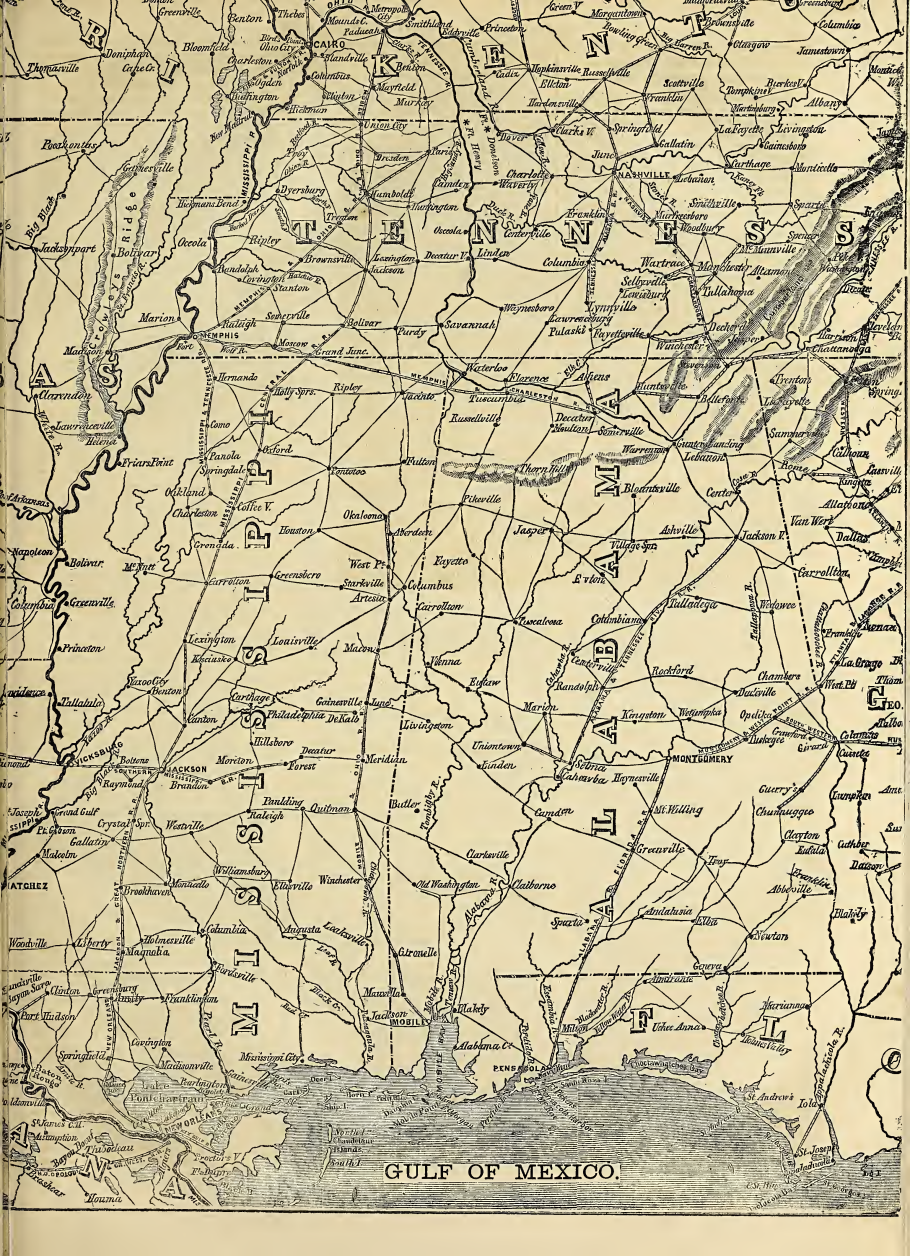
We aim to give pictures in this department that tell their own story—that "speak for themselves" so plainly, that they hardly need even the artist's title line underneath. What a lesson is taught by the above picture. It is early Spring time. The birds have come forth from their Winter hiding places, but an untimely March snow storm has caught them, and has spread its mantle over the ground, and covered up the insects, and last year's seeds upon which they feed. See, with what confidence they come to the window, and say as plainly as they can say: "Please, Miss, throw us a few crumbs, for we are hungry." Did it ever occur to you, young friends, that nearly all birds are naturally *tame*; that they are not afraid of men and women, or of boys and girls, until they are taught by harsh usage to fear them? Travelers who have visited uninhabited Islands, tell us, that at first the birds come around them as familiarly, as they do around our oxen, cows, horses, and sheep, here. You never see the birds afraid of domestic animals. They will even light upon the backs of the sheep, and pick up the stray locks of wool to line their nests. They light down among the cows, and hop around between their feet. They would be just as familiar with us, if we never misused them. And would not that be pleasant? How many more nice apples, and cherries, and plums we should have, if no one had ever frightened away the birds, but if, on the contrary, these little songsters felt free to build their nests among our trees, and gather for themselves and their little ones the insects, which are their natural food. (Please turn to page 75, and read something there about the Birds and Insects.) It will take a long time to bring back the birds to their *natural* confidence in us, but it may be done. We ask all our young friends to try and bring this about. Never chase the birds, or halloo, or say "shoo" to them, and never permit the boys to throw sticks or stones at them, and you will soon find them growing more tame and more useful every year. Birds usually return year after year to the same localities, even to the same trees, where they or their parents lived. That is the case with the birds in our picture; and they *remember* that they have always been kindly treated, or you would not see them hopping so fearlessly to the well-known window to meet their old friend.

A Strong Man—How he Came So.

Thirteen years ago, a small nervous boy, 16 years old, entered the Freshman class of Harvard College, at Cambridge, Mass. So diminutive and puny was he, that only one out of about a hundred of the young men in the class measured and weighed less. He still weighs less than 150 pounds we believe, though about 29 years old. Yet at Brighton, Mass., on the 9th day of last October, this same man lifted and held up a platform on which stood *twelve* men, every one of them larger than himself. On the 21st day of November he lifted **2,007** lbs., equivalent to shouldering a very large horse, or ox, or lifting a whole load of hay, or thirty three bushels of wheat, or nearly *thirty six bushels of shelled corn!* This great weight of 2,007 lbs., was supported on his shoulders by means of a wooden yoke, like that used in the sugar grove to carry two pails of sap. He expects yet to lift **3,000** lbs., and we shall not be greatly surprised if he does so. We refer to Dr. Geo. B. Windship, of Boston, whom we take the liberty of naming the "American Sampson."—There appears to be nothing in his natural form, or constitution, different from other men, and there seems to be no reason why other men may not attain to the same strength. We would not, however, advise any one else to aim at his particular feats, but the method by which he has gained his present physical health and power, affords a useful lesson to boys, and girls too. Most of our young readers have heard of the man who carried an ox, and how he did it. He began by carrying a calf, and carried it daily until it grew up. In a similar manner Dr. Windship began to take vigorous exercise while yet a boy at college. He continued this daily, and after a time began to lift weights, then barrels of gravel to which he could add a little more from day to day. The use of the muscles of the body not only increased their strength, but they were disciplined so that he could use them in the desired direction, as referred to in speaking elsewhere of the blacksmith's boy. It should be stated also, that he practiced temperance in eating and drinking—eating but moderately of nourishing food so as not to overtax the stomach, and abstaining from liquors, tea, coffee, etc., which give a temporary stimulus, always followed by a corresponding depression. And just here let us say to our boys on the farm, there is nothing so good to give you vigorous health, strength, and "good feelings," as your daily toil—holding plow, carrying wood, picking up stones, and so on. Why, when sixteen years old we spent a winter at an Academy, where there were a lot of City boys, who were larger than we were, and delighted in making sport of the "green farmer boy.' We remember taking two of them by the collar one in each hand, and holding them so strongly that they could hardly move. This came from long practice at wrestling——with the plow-handles on stony ground, and among stumps and roots in new land. (That was a good while ago, but those strong muscles, and the vigor of constitution, are not lost.) Whatever a man is to do in after life, the very best *preparation* is thorough active labor on the farm, with the plain substantial food of the farmer's table. Nearly all of the really successful men in all kinds of business, and in every profession in this great city, and in other cities, are those who lived and *worked* on the farm until full-grown. And for the comfort of those who are so troubled at being poor, let us say, that nineteen out of twenty of the present successful farmers, as well as the successful men in other business and pursuits are the sons of *poor* parents. The fact that they were compelled to use their muscles, and brains, gave them the very strength and discipline essential to success. A boy or girl brought up without hard work, is like an arm carried in a sling; it is weak and puny. Remember, also, that just what strong exercise does for the body—mental exercise does for the mind. A person may inherit wealth, or may get it by good luck—but bodily strength, and strength of mind, can *only* be got by exercise.—Work away then my boys, and my girls too. Every day's work pays you something in increased vigor and health; every lesson learned, every hard problem worked out *without help*, adds to your strength and discipline of mind, and to your *real* worth.

About the Crown of England.

Few persons have any idea of the brilliancy and cost of the Imperial State Crown, or Cap, worn by Queen Victoria on certain State occasions. Here are a few interesting items: It was made in 1838, by Messrs. Rundell & Bridge of London. It weighs 3 pounds, 3¾ ounces, troy; or a little over two and four-fifths pounds avoirdupois. It contains **3,273** jewels, consisting of 2,783 diamonds, 277 pearls, 17 sapphires, 11 emeralds, and 5 rubies. They are catalogued thus: 1 large ruby irregularly polished, 1 large broad-spread sapphire, 16 sapphires, 11 emeralds, 4 rubies, 1,363 brilliant diamonds, 1,273 rose diamonds, 147 table diamonds, 4 drop-shaped pearls, 273 pearls. These are all placed upon a cap of crimson velvet, with a border of ermine, and lined with white silk. The jewels are arranged in the form of bands, festoons, arches composed of diamonds arranged like oak leaves and acorns, one large cross, four Maltese crosses, etc.....Several of the most precious jewels belonged to former crowns, and some of them have been in possession of the Royal family for 500 years or more. As men estimate, the value of the crown amounts to many millions of dollars. For real utility in itself, it is of infinitely less value than three pounds of iron. To a man cast away upon a desolate island, the jewelled crown would be of no account, while three pounds of iron, in the form of steel, fashioned into hatchet, knife, needles, etc., would add immensely to his comfort by enabling him to obtain food and shelter, and perhaps the means of escape.


KENTUCKY
TENNESSEE
MISSISSIPPI
ALABAMA
GEORGIA
LOUISIANA
ARKANSAS
CAIRO
MEMPHIS
NASHVILLE
VICKSBURG
JACKSON
MONTGOMERY
MOBILE
PENSACOLA
GULF OF MEXICO.

PREMIUM LIST,

For 1862---Vol. XXI.

Or Pay to Voluntary Agents who will attend to collecting names of new and old subscribers to the Agriculturist, and forwarding them to the Office.

☞In selecting articles for premiums, we have aimed to get such as are *useful*, and as have been most frequently called for by our readers. ☞WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ Every person collecting names for premiums, should send two copies of each list of names—one of them marked "For Premiums," and also with the name of the sender.

☞ The premiums are offered for subscribers for Volume XXI (1862), *whenever received.* Canvassers will have time for completing their lists, but the premium will be paid as soon as any club is made up—if duplicate lists are sent. ☞ Clubs need not be all confined to one Post Office.

Table of Premiums for 1862.

Names of Premium Articles.	Price of Premiums.	Names at $1 each.	Names at 80 cts. each
2—Clothes Wringer, No. 2	$7 50	18	37
3—Clothes Wringer, No. 1	$10 00	23	48
4—Sewing Machine, (Wheeler & Wilson)	$45 00	90	130
5—Sewing Machine, (Wilcox & Gibbs)	$35 00	69	98
6—Aneroid Barometer	$7 50	19	44
7—Hydropult	$12 00	30	48
8—Five Octave Melodeon (best)*	$75 00	125	237
9—4½ Octave Melodeon (best)*	$60 00	104	182
10—Four Octave Melodeon (best)	$45 00	90	130
11—New Cyclopedia, 16 volumes	$48 00	96	140
12—Worcester's *Unabridged* Dictionary	$7 50	18	40
13—Five back Volumes Agriculturist, *p.p.*	$5 60	16	30
14—Four do do do do	$4 48	13	26
15—Three do do do do	$3 36	10	20
16—Two do do do do	$2 24	.	15
17—One do do do do	$1 12	..	10
18—Windsor & Newton's Paints	$2 50	..	20
19—Osborn & Hodgkinson's Paints	$1 50	..	15
20—Hand Corn Sheller (best)	$6 50	21	40
21—Straw and Hay Cutter (best)	$8 00	24	48
22—Best Subsoil Plow (2-horse)	$8 00	24	48
23—Various Books—*See terms below*			
25—Youth's Chest of Tools	$13 00	28	60
26—Gentleman's Chest of Tools	$20 00	43	80

* *See Advertisement, page* 94.

Premiums. 2, 3.—Wringing Machine.

We place this first, for it is nearly new, and one of the most useful articles for every family. The saving to garments would soon pay the cost of the implement, to say nothing of the saving of woman's labor. The machine is set upon the side of any tub; the garments drop out into a basket. A child can quickly wring out a tub full of clothes—No. 2, costing $7.50, is just the thing for common family use.

Premium No. 4—Sewing Machine.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person sending them to *Wheeler & Wilson's* best **$45 Sewing Machine,** (including **Hemmer**), new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly *four* years' use in our own family, in connection with other machines. We want no better.—Premiums 4 and 5 will be selected new at the manufactories, be well boxed, and forwarded without expense to the recipient, except for freight. Full instructions sent for setting up and using.

Premium No. 5—Sewing Machine.

69 Subscribers at $1 each, (or **98** at 80 cents each,) will entitle the person procuring them to *Willcox & Gibbs'* **$35 Sewing Machines,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with one thread,) and has several points superior to other machines. It is neat, well made, simple in its operation; and having tested one in our own family for more than a year, we think highly of it, and can recommend it to those who can not afford to buy the higher priced double-thread machines.

Premium No. 23—Good Books.

Here is an opportunity to get a good library at little expense. Any person getting up a club of **16** or more names, may choose any desired Books from the list advertised on page 91, *to the amount of* 12½ *cents for each name sent at* 80 *cents*, (or 33⅛ cents for each name sent at $1); the books will be *delivered to the recipient free of all expense for postage.*

☞For descriptions of other premiums see Jan. No., page 28.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Wednesday Morning, Feb. 19, 1862.

*** The materials for this review are furnished specially for the *Agriculturist* by a reliable man of long experience, who, throughout the year, spends the whole of each business day in the markets, watching the transactions and collecting information, and we flatter ourselves that this report is one of the most correct anywhere published.

The Breadstuff Markets have been comparatively quiet for a month past. The condensed but comprehensive tables below show at a glance the transactions—including receipts, sales and exports. The table of Current prices indicate the change in selling values. Both Wheat and Flour are somewhat dearer. The recent Foreign advices have been encouraging to exporters, and they have also been favored by low rates for freights, and the greatly advanced value of foreign exchange. The bills drawn against shipments of Breadstuffs to England, which were hard to sell at 102@103 only a short time ago, have recently been in demand at 110 to 113@114. The receipts of Flour and Wheat from the interior have, taken together, been below those of the previous month, and decidedly less than for the corresponding period last year, as shown in tables 1 and 2, while the exports have been much larger this year, as seen in table 3. This has diminished the stock on hand, while the foreign demand is increasing. Holders of Breadstuffs are therefore firm, and with apparent good reason look for still better prices, especially as all our advices from abroad indicate the continuance of the heavy foreign demand which we have all along predicted, while no large addition to city supplies can be expected before the opening of the canals. Many foreign orders, recently received, have been limited to such rates that they could not be filled, with the views held by owners here, which has restricted the transactions....Corn has been quite freely offered, and prices have declined. The demand has not been very active, and at the close the market is quite heavy, though holders are very reluctant to make any concessions to buyers....Rye has been in lively request for export, and has advanced.... Barley also advanced materially early in the month, but has recently been less sought for, and is lower again ... There has been less doing in Oats, which are cheaper.... The success of the Union forces, on land and sea, have had a very significant influence on the market for Cotton, which has fallen off in value, on an average, about 7c. ℔ lb.—the market closing heavily, with a downward tendency....There has been a very large business transacted in Provisions, for both immediate and future delivery, at improved prices for Pork and Beef....Wool has been in limited demand lately, and low and medium grades have declined....The movements in other branches of trade have been moderate. The price table shows any changes in values.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 days *this* m'th	155,000	111,600	134,500	97,700	148,000	172,000
26 days *last* m'th	272,000	61,500	45,200	22,550	63,000	128,150

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
25 days *this* month,	394,000	914,000	1,175,000	196,000	186,500
26 days *last* month	392,100	1,116,000	1,205,250	145,400	138,700

2. COMPARISON WITH SAME DATE LAST YEAR.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 days 1862	155,000	111,600	134,500	97,700	148,000	172,000
26 days 1861	159,500	255,000	133,400	8,270	73,300	77,000

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley*
25 days 1862	394,000	914,000	1,175,000	196,000	186,500
26 days 1861	363,000	1,638,000	1,380,000	26,900	51,800

3. *Exports from New-York, from Jan.* 1 *to Feb.* 13.

	Flour, bbls.	*Wheat, bush.*	*Corn.*	*Rye.*	*Oats.*
1862	358,887	1,542,610	1,471,747	150,855	2,297
1861	237,506	1,114,492	886,130	———	13,852

4. *Breadstuffs Trade of Toledo in* 1861.

	Receipts.	Shipments.
Flour, (in bushels)	7,032,380	6,720,555
Wheat, bushels	6,277,407	6,288,936
Corn, bushels	5,312,038	5,074,366
Oats, bushels	41,428	46,171
Rye, bushels	31,198	29,610
Barley, bushels	12,064	6,607
Total	18,706,510	18,301,245

CURRENT WHOLESALE PRICES.

	Jan. 20.	Feb. 19.
FLOUR—Super to Extra State	$5 45 @ 5 90	$5 60 @ 6 10
Superfine Western	5 40 @ 5 55	5 60 @ 5 70
Extra Western	5 70 @ 7 00	5 90 @ 7 00
Fancy to Extra Genesee	5 95 @ 7 00	6 10 @ 7 00
Super. to Extra Southern	5 80 @ 8 25	6 05 @ 8 00
RYE FLOUR—Fine and Super.	3 00 @ 4 30	3 00 @ 4 25
CORN MEAL	2 90 @ 3 30	2 90 @ 3 30
WHEAT—Canada White	1 45 @ 1 50	1 48 @ 1 55
Western White	1 44 @ 1 52½	1 45 @ 1 58
All kinds of Red	1 26 @ 1 45	1 30 @ 1 50
CORN—Yellow	66 @ 67	60 @ 68
White	68 @	64 @ 75
Mixed	65 @ 66	64 @ 65
OATS—Western	41 @ 42	40 @ 41
State	42 @ 43	41 @ 42
RYE	81 @ 84	82 @ 85
BARLEY	72 @ 80	80 @ 90
HAY, in bales, per 100 lbs	85 @ 1 00	85 @ 95
COTTON—Middlings, per lb	32 @ 34	27 @
RICE, per 100 lbs	6 75 @ 7 75	7 00 @ 7 75
HOPS, crop of 1861, per lb	17 @ 24	15 @ 23
FEATHERS, Live Geese, p. lb	30 @ 36	32 @ 38
SEED—Clover, per lb	7 @ 7¾	7 @ 7½
Timothy, per bushel	2 00 @ 2 12½	@ 2 00
SUGAR—Brown, per lb	7 @ 9¼	6½@ 8¾
MOLASSES, New-Orleans, p.gl.	50 @ 50	50 @ 55
COFFEE, Rio, per lb	17½@ 20	18 @ 21
TOBACCO—Kentucky, &c, p.lb.	9 @ 17	10 @ 18
Seed Leaf, per lb	6 @ 21	6 @ 21
WOOL—Domestic fleece, p. lb.	44 @ 54	42 @ 54
Domestic, pulled, per lb	38 @ 50	36 @ 50
TALLOW, per lb	9¼@ 9½	9 @ 9¼
OIL CAKE, per ton	32 00 @37 50	31 00 @37 00
PORK—Mess, per bbl	11 75 @12 37½	12 37½@13 12½
Prime, per bbl	8 00 @ 9 50	8 50 @ 9 50
BEEF—Plain mess	11 00 @12 00	11 75 @12 50
LARD, in bbls., per lb	7½@ 8½	7¼@ 8⅜
BUTTER—Western, per lb	11 @ 15	11 @ 15
State, per lb.	15 @ 21	16 @ 21
CHEESE	5½@ 7¼	5 @ 7
Broom Corn—per lb		4 @ 6
EGGS—Fresh, per dozen	16 @ 17	16 @ 17
Limed, per doz	14 @ 16	15 @ 16
POULTRY—Fowls, per lb	5 @ 9	7 @ 10
Geese, per lb	6 @ 7	5 @ 9
Ducks, per lb	8 @ 12	9 @ 14
Turkeys, per lb	6 @ 9	8 @ 12
Dried Apples, per lb	6½@ 7	6½@ 7
Dried Peaches, per lb., peeled	18 @ 20	18 @ 20
Dried Raspberries, per lb	13 @ 14	13 @ 14
POTATOES—Mercers, p. bbl	2 00 @ 2 25	2 00 @ 2 50
Peachblows, per bbl	1 75 @ 1 88	1 88 @ 2 00
Western Reds, etc.—per bbl.	1 38 @ 1 50	1 25 @ 1 75
Nova Scotias—per bush	50 @ 55	55 @ 60
Sweet Delaware, per bbl	3 50 @ 3 75	3 50 @ 3 75
ONIONS—Red, per bbl	1 00 @ 1 12	@ 1 75
White, per bbl	1 25 @ 2 00	2 00 @ 3 00
TURNIPS—Rutabaga, per bbl.	75 @ 1 00	@ 1 00
SQUASH—Marrow, per bbl	1 50 @	1 75 @
APPLES—Common, per bbl.	2 50 @ 3 00	2 75 @ 3 00
Apples—good, per bbl	3 50 @ 4 50	3 50 @ 4 50
Cranberries, per bbl	8 00 @11 00	9 00 @12 00

N. Y. Live Stock Markets.—THE CATTLE MARKETS.—There have been five weekly market days since our last report, at which the offerings have averaged, 3,718 head: total 18,693. These have about equalled the demand. Snow and ice have prevented the prompt arrival of stock trains and confused the markets somewhat. At the market to-day (Feb. 20), with 3,894 receipts for the week, good nice killing steers have sold at 8½c.@9c. ℔ lb. estimated dressed weight; the next class 7¾c.@8¼c.; common animals, 7c.@7½c.; and poor thin steers, rough oxen and dry cows, 5½c.@6½c. Most of the sales were between 7½c.@8½c.; the average being 7¾c.@8c., or a slight advance from five weeks ago. Some extra cattle have been sold at 10c. during the month.

Veal Calves.—Receipts for the past 5 weeks number 1,563, or 312 per week. They have sold readily at ½c. advance or 5½c.@6c. ℔ lb. live weight, for the best calves, and 4c.@5c. for poor to fair veals.

Sheep and Lambs.—Receipts continue about as last month, or 8,020 per week. Market slow, just now at a decline of ½c. ℔ lb., from the figures of last month. Prime fat sheep are worth 4¾c. ℔ lb. live weight, extras 5c. Fair sheep 4½c. Some stock left over.

Live Hogs.—Receipts have fallen off materially since last month, the weekly arrivals being 23,969. Prices have advanced ½c. ℔ lb. Stock selling about as fast as received at 3¾c.@4c. for prime corn-fed hogs.

The Weather, during a month past has been mild for Winter, the mercury at no time falling below 10°. Snow storms have been frequent giving two to three weeks of good sleighing. The changes have been frequent and sudden, with many cloudy or stormy days and the barometer has vibrated much and suddenly, ranging through a full inch.——OUR DAILY NOTES, condensed, read, *January* 21, clear, 1 inch snow at night—22, clear, fine—23, 24, cloudy with 3 inches snow and hail on night of 24th—25, N. E. rain, barometer very low (29.20)—26, 27, clear fine—28, clear A. M., ½ inch snow P. M.—29, fog, light rain at night—30, rain—31, clear, fine——*February* 1, N. E. snow storm, 4 inches—2, clear, fine sleighing—3, cloudy A. M., and 2 inches more snow, P. M.—4, cloudy—5, clear—6, cloudy A. M., rain P. M.—7 to 10, clear, fine, mild—11, clear, ½ inch snow at night—12, fine, warm—13, cloudy—14, clear, fine—15, cloudy A. M., with 1 inch snow P. M.—16, clear A. M., cloudy P. M.—17, rainy P. M.—18, cloudy A. M., clear P. M.—19, snow P. M., thunder shower at night—20, clear, windy.

Rain Fall.—The rain and melted snow for a month ending Feb. 15th, amounted to 5.14 inches.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.)—*r* indicates rain—*s*, snow.]

JANUARY.

1......38°	8......18	15......28*s*	22......29*s*	29......28*r*
2......27	9......35*r*	16......33	23......28	30......36*r*
3......18	10......34*r*	17......25	24......30*r*	31...... 28
4...... 18	11......31*s*	18......32*r*	25......34*r*	——
5......10	12......33*r*	19......32*r*	26...... 30	Average 28°
6......17*s*	13......35	20......33*r*	27......28	
7......24	14......18	21......31	28......23*s*	

FEBRUARY.

1......29*s*	4......24	7......38	10......18	13......31
2......30	5......24	8......27	11......20*s*	14......33
3......20*s*	6......28*r*	9......26	12......33	15......23

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.
TERMS— (invariably cash before insertion):
FOR THE ENGLISH EDITION ONLY.
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STONE MASON CABBAGE, the standard Cabbage in Boston Market. It is the most reliable for selling, large, hard heads, and for sweetness and tenderness of all the drumhead varieties. It is also an excellent variety to plant in June. I am daily receiving letters from persons in all the Loyal States and the Canadas of successful all the excellent qualities I have claimed for it. Packages containing one ounce of seed of my own raising, with directions for cultivation, 25 cents; one pound $2.00. Early Marblehead Turnip-rooted (French seed) 25 cents per ounce, this is an excellent variety for light soils and general cultivation. Large Drumhead Savoy, seed of my own raising, 25 cts. per oz. Hubbard Squash, purest growth, 12 cts., extra per Mary, 12 cts. per packet, $1 per lb. Purely Parsis Cauliflower, best early variety, 25 cents; Early Frame Cucumber, (small fruited,) 25 cents; New White Spine, 10 cts.; Squash Pepper, warranted true and fresh, 10 cts.; Tom Thumb or Sweet Corn, very dwarf, but reaches high, and bears well, 12 cents; Darling's Early Sweet Corn, best of the early sweet varieties, 18 cents; Darling's Mammoth Sweet, best of all the large varieties, 10 cts; Stowell's Evergreen Corn, excels all in keeping long in green state, 10 cents; French bush Lettuce, early, 6 cts.; Imperial Cabbage, 6 cts.; Mountain Sweet Watermelon, very excellent, 10 cents; Christmas Muskmelon, early and superior, 8 cents; Coles' Crystal White Celery, 10 cts.; Danvers Yellow Onion, 10 cts.; Dandelion Seed, 10 cts.; Early Sweet Marjoram, 6 cts. All of the above will be sold by the ounce or pound. Catalogues of every variety of garden and Flower Seeds, Trees, Shrubs, Bulbs and grass. Part of my seed is of my own growing, the remainder from reliable sources. JAMES J. H. GREGORY,
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Kitley's Carolina Superba, Kitley's Goliah (enormous size and late), Nicholson's Superb, Princess Royal (very promising).

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We will send to any post office address in the country, post paid, and carefully put up so as to carry safely, one hundred good plants of any of the above varieties, at the prices annexed. For instance, 100 Wilson's Albany for $1; 100 Trollope's Victoria, $1.50; 100 Triomphe de Gand, $2, &c.

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Five Varieties and Five Hundred Plants for Five Dollars.

For $5 we will furnish 100 plants each of the following kinds: Triomphe de Gand, Trollope's Victoria, Burr's New Pine, Jenny Lind and Wilson's Albany.

Ten Varieties and One Thousand Plants for Ten Dollars.

For $10 we will furnish 100 plants each, of the following choice kinds: Triomphe de Gand, Trollope's Victoria, Vicomtesse Hericart de Thury, Fillmore, Downer's Prolific, Burr's New Pine, Jenny Lind, Cutter's Seedling, M'Avoy's Superior and Wilson's Albany.

Seven Varieties and Twenty Thousand Plants for One Hundred Dollars.

For $100 we will furnish 10,000 Triomphe de Gand, 5,000 Wilson's Albany, 1,000 Trollope's Victoria, 1,000 Fillmore, 1,000 Jenny Lind, 1,000 Cutter's Seedling and 1,000 Downer's Prolific.

For the above list, five per cent will be added for boxes and packing.

TRIOMPHE DE GAND.

5,000 for $45, 10,000 for $75, 20,000 for $100. For the $100 lot five per cent will be charged for boxes and packing.

WILSON'S ALBANY.

3,000 for $10. Large quantities at same rate.

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For description of this superb and unrivalled Strawberry see our Circular. We will furnish this variety, and the Wilson's Albany—the two leading varieties, at the above rates:

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Brinckle's Orange and **Franconia**, $1 per dozen, $5 per 100, $30 per 1,000.

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For $10 we will furnish 100 **Brinckle's Orange,** the finest flavored Raspberry, as well as one of the largest, most beautiful, and productive.

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The above kinds include the three colors, orange, red and black, and furnish a pleasant variety in flavor. We regard them as the best for amateurs, and the most profitable for market culture.

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New-Rochelle, $1 per dozen, $5 per 100, $25 per 1,000, $100 per 5,000.

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Large Red, Large Yellow, Apple and Peach, Red Plum, Yellow Plum, Red Fig, (sometimes called Pear,) Yellow Fig Cherry, Lester's Perfected, New White French Tree Tomato, the new upright variety. Packages of seed of all the above choice varieties, will be forwarded, post-paid on receipt of one dollar. French Tree Tomato 30 cts. per package; New White, 15 cts.; Lester's Perfected 12 cts.; Large Red 25 cts. per ounce. *Every variety of Garden Seed for sale.* Catalogues gratis. Packages warranted to reach all who purchase. JAMES J. H. GREGORY, Marblehead, Mass.

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☞ All Melodeons of our manufacture, either sold by us or dealers in any part of the United States or Canada, are warranted for perfect in every respect, and should any repairs be necessary before the expiration of five years from the date of sale, we hold ourselves ready and willing to make the same free of charge, provided the injury is not caused by accident or design.

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The superintendent of this department has been with us since the commencement of this business, and, being a practical workman, has originated, improved and perfected all the machinery for making our reeds, and there are no duplicates in any other manufactory.
From the fact that our reeds are celebrated for their uniformity, evenness and sweetness of tone, we very often receive orders for them, or solicitations from manufacturers to supply them with what they require; but as we never sell any part of our instruments separate, we always decline to fill such orders.
In case the reeds of our Melodeon should at any time be so unfortunate as to break a reed, they can, by informing us which it is, receive by return mail a new one properly fitted and ready to put in, free of charge.

☞ Agents for the sale of our Melodeons can be found in all the principal towns of the United States and Canada.
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Large Mills are made for milling purposes requiring but ONE HALF THE POWER to do the work of large flat stone mills
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See *American Agriculturist* for 1861, pages 257 and 268, also page 31, in this volume.
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Horticultural Tools, consisting of a large assortment of SPADES, SHOVELS, RAKES, HOES, FORKS, REELS AND LINES, PRUNING SHEARS, KNIVES AND SAWS, GRAFTING AND BUDDING KNIVES, VINE SCISSORS, &c.

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We always have on hand the largest and best assortment of AGRICULTURAL AND HORTICULTURAL IMPLEMENTS to be found anywhere in the City. R. H. ALLEN & CO.,

Successors to R. L. Allen.

Chester County Pigs.

The undersigned continues to execute orders as heretofore, for his pure stock of the above, which will be carefully shipped to any point of the Union.

The selections are made only from pure bloods, and chiefly from premium animals, which have been uniformly successful at our local Fairs. He refers to purchasers from him in all sections of the Union.

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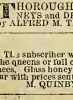

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We have established an office at No. 16 South William-st., New-York, for the sale of Rhodes' Standard Manure, and will be represented by Mr. H. E. MORING, to whom dealers will please apply. P. M. RHODES & CO.,

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No. 1 Peruvian Guano—Warranted Pure.

Sold at wholesale and retail, at the lowest market price.

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Farmers and Gardeners, ATTENTION!

BRUCE'S CONCENTRATED MANURE.

OFFICE 25 PARK-ROW, NEW-YORK.

During the short time this manure has been before the Canadian public, the demand for it both in Canada and the States has so rapidly outran the supply, that the subscriber has been induced to establish a manufactory at *Cootake Point, N. J.*, where, with improved machinery and enlarged facilities, they will be enabled to meet promptly all demands; with their knowledge of the materials, and the satisfactory results produced, where ever used, they have to destitution in putting it before the public as one of the most valuable fertilizers in use. Its composition is such, that while it furnishes food to the growing plant, forces its growth to maturity, and puts it in the best condition for the reception of future crops, does not in any respect unlike guano, destroy other portable manures. *It is a soil improver as well as a plant improver.* It has been tried by various parties competent to form a judgment of its merits, and their testimony has been unfortunately in favor. We have several hundred certificates of Farmers, Gardeners, and Florists both in the U. S. and Canada. Below is one from Peter B. Mead, Esq., Editor of the Horticulturist:

NEW-YORK, Sept. 17th, 1861.

DUNCAN BRUCE, Esq., *Dear Sir*:

I have made trial of your Fertilizer during the past season, and the results warrant me in speaking of it in terms of commendation. I have tried nearly all the Fertilizers now in use, but none of them have given me as much satisfaction as your own. It produces a healthy and luxuriant growth, and is quite free from the disagreeable quality which renders the use of guano and some other fertilizers so dangerous, especially in a garden. I used your preparation freely over plots during the drouth of the past season with good effect. Guano applied in like manner almost invariably burns the plants up. I have never on the whole been partial to most of the artificial manures in the market, but my experience with yours, warrants me in saying that it possesses very high merit. It possible, you ought to establish a factory here as well as in Canada. Yours respectfully, PETER B. MEAD,
Editor of the Horticulturist, New-York.

LETTER FROM DOCTOR JUDD.

DUNCAN BRUCE, Esq., *Sir*:

I have used your fertilizer a fair trial, and find it an excellent material. It only requires to be once properly used, and then it will speak for itself. I have found it superior to any fertilizer I have heretofore used, and I have supplied pretty much all that have been presented.

RICHARD PENNELL, M. D.,
Member of New-York Horticulturist Society.

LETTER FROM PROF. C. THOMAS.

I have made repeated experiments, the past season, with Mr. Bruce's Concentrated Manure, and have found it recommend it as a most energetic fertilizer of both vegetable and flower plants. It was tried on various soils, dry and retentive, as well as a variety of vegetables, which quickly assumed a plethoric growth, and continued vigorous throughout the season, which has been unfavorable for fertilizers of organic plants. For Indian Corn, Tomatoes, Egg Plants and Early Potatoes it is capital.

Newark, New Jersey. C. THOMAS, M.D.

Send your orders direct to C. W. VAN DOREN, 25 Park Row, New-York. Factory Constable Point, N. J., opposite North-Amboy, Middlesex County. The Concentrated Manure is $40 per ton, put up in barrels of 200 lbs. each. We have also bags of 25 lbs. for those having Grape Vines and Flowers in a small way to attend to.

PROVIDENCE COMPANY'S CONCENTRATED BONE FERTILIZER.

This is the best Fertilizer, at the price, ever offered to the farmer.

It is composed of pure bone, ground fine, with other materials added to give it immediate effect.

It powerfully stimulates the plant from the moment the seed germinates until harvest.

It will not only fill the farmer's crib, but will enrich the soil. Try it.

It is packed in good flour barrels, and delivered to vessel or railroad, in New-York City, free of charge for cartage, at the following prices:

For one barrel, $2; two, $3 50; three, $5; four, $5 50; five, $8; six, $9 50; seven and over, $1 50 per barrel.

Two barrels will manure one acre of man in the hill.

Send your orders, inclosing the cash, by mail, to

GRIFFING, BROTHER & CO.,
No. 60 Courtlandt-st., New-York,
Who are Sole Agents for the United States.

GENUINE

SUPER-PHOSPHATE OF LIME,

Manufactured from **Raw Bones,** dissolved in *Sulphuric Acid,* with a few important additions, *at $45 per ton,* by

A. LISTER & BROTHER, Tarrytown, N. Y.

(For results of the present season see *American Agriculturist* for August, 1861, page 264.)

We guarantee every ton of our manufacture to be of uniform quality, and invite trials or chemical analysis.

We also manufacture Ground Bone, for sale by ourselves, BONE, the fine, medium, and coarse ground **Bone Manure,** for lasting and immediate effect upon the crops, and Bone Dust, for the coarse ground is particularly valuable for *Fruit Trees and Grape Vines,* which require a constant and lasting source of nourishment.

For sale in large and small quantities by

A. LISTER & BROTHER, Tarrytown, N.Y.
and their agent, F. LANGMAN, 159 Water-st., New-York.

ONE THOUSAND DOLLARS REWARD.

As Griffing Brothers & Co., were our Agents for two years, and are now advertising Poudrette with their brand, relying upon the reputation of the THE LODI MANUFACTURING CO., and the fact of having once been our Agents to assist them in the sale of theirs. And as it is different for people to discriminate always between the two.

I hereby offer a reward of One Thousand Dollars to any person, who can discover any other manufactory of real or pretended Poudrette, other than THE LODI CO.'s *the entire buildings of which will stand within the hoops any* that the LODI MANUFACTURING CO., put upon their barrels in the course of *one year*—said Factory to be within 100 miles of New-York City. JAMES R. DEY,
Prest. Lodi Manufacturing Co.

150,000 BARRELS POUDRETTE.

Send your orders early, and you will be sure to get them filled. Address GRIFFING, BROTHER & CO.,
Agricultural and Seed Warehouse,
No. 60 Courtlandt-st., New-York.

100,000 Barrels

OF THE

LODI MANUFACTURING COMPANY'S

POUDRETTE,

FOR SALE BY

JAMES T. FOSTER,

No. 66 Cortlandt-st., New-York.

The large facilities which they enjoy by exclusive contract for all the night soil of the City of New-York, and large capital invested in their extensive works, enable them to manufacture an article which is superior to any other fertilizer in market, taking *cost* and *yield* into consideration. It will be sold at the usual price of $1 50 per barrel for seven barrels or over, delivered free in New-York City.

Please take notice that the office and sale of this Company's Poudrette is changed from Messrs. Griffing, Brother & Co., No. 60 Cortlandt-st., to No. 66 CORTLANDT-ST.

Other brands of what purports to be Poudrette are in market, put up in barrels to resemble this. Beware of frauds—buy that only which has the brand of the Lodi Manufacturing Co. Any other article is comparatively worthless.

We call the attention to the following experiences of practical farmers, in different sections of the country:

NORTH PEMBROKE, Mass., Oct. 7, 1861.

James R. Dey, Esq., President of the Lodi Manufacturing Co.:

Dear Sir—The early autumnal frosts for several years past have seriously injured our corn crops, and rendered it necessary for farmers in this section to seek some fertilizer to give their crops an early start, in order to bring them to maturity in season to avoid that calamity. Having experimented with Guano, Superphosphate of Lime, etc., with indifferent success, in the Spring of 1861 I purchased four barrels of the Lodi Manufacturing Co.'s Poudrette, which I applied principally to my corn crop, with the most satisfactory results. This was the first Poudrette ever introduced into this vicinity. Last Spring I procured from your branch office in Boston about thirty barrels, for which I found a ready sale to my neighbors, who had witnessed the effect of my last year's trial, which, so far as has been tested thus, has given universal satisfaction. To farther test the efficacy of your Poudrette, this year I ploughed and hoed two acres of light, sandy soil, which had laid in grass about six years, (the last crop of which was very light.) This I planted with corn and potatoes, applying about four and a half barrels of Poudrette, and to other manures, always a handful of ashes to each hill at the first hoeing, and from present appearances we shall have a better crop than on a field of like soil where we applied twenty-five loads of manure to the acre. Its effects on garden vegetables are equally apparent. I am, very respectfully, yours,

HORACE COLLAMORE.

MERRILL, Me., Oct. 11, 1861.

Lodi Manufacturing Co.:

Sirs—I bought of your agents, Cross & Newell, two barrels of your Poudrette, and, in using the first, I got sick of it, and sold the other barrel. But the one that I used I tried the principal part on potatoes. I used about half a pint to the hill, and the yield was equal to those planted on manure at the rate of twenty loads to the acre. My neighbor, who bought the other barrel, says if he had bought five barrels more, he would have saved the price of twenty barrels.

Yours, &c., V. B. FALLS.

To the Lodi Manufacturing Co.: WALDO, Me., Oct. 12, 1861.

Gentlemen—Last Spring I bought of Cross and Newell one barrel of your Poudrette to experiment upon, but to my satisfaction in its utility. I put it on six rows of corn in different parts of the field, after hoeing; with barnyard manure, in the usual way—at the second time hoeing. Where I put the Poudrette the corn was twice as large as the rest of the field, and this now is one-third heavier, and has ripened about eight days earlier. I think it the very thing we want for raising corn in this country, and shall use it more extensively another year. WELLINGTON SHOREY.

SMYRNA, Del., Oct. 1, 1861.

Gentlemen—I had heard of the Poudrette manufactured by the Lodi Manufacturing Co., and thought I would try a small quantity on a lot of land intended for corn, and as I could not get it nearer than Philadelphia, I went and bought of the agent twenty barrels, and applied two barrels to the acre, dropping the corn and a handful of Poudrette in each hill. I left out a part of two rows, and put no Poudrette, to ascertain if there was any value in it, and noticed those two rows during the season, and where the Poudrette was used the corn was decidedly the best, and I have no hesitation in saying it is a good manure for corn. I am certain I made from one-third to one-half more by using it.

Yours, respectfully, JOHN G. BLACK.

CHESTER, Pa., Sept. 15, 1861.

To the Lodi Manufacturing Co.:

Gentlemen—I purchased this season of Messrs. Baker & Co., eleven barrels of Poudrette and one bag of Pruine, which I put on my corn. I marked the place where I put the Pruine, which, when the corn was ripe, was not now the corn where the Poudrette was as in much the best. Last year I used Allen & Needle's new Fertilizer, which did no good at all, as the corn done better without the manure. I think the Poudrette made by your Company the cheapest manure in use. Yours, &c.,

A. R. PERKINS.

The Company's pamphlet, containing directions for its use, with other valuable information and the experience of over one hundred farmers, will be sent free to any one applying for the same. Address,

JAMES T. FOSTER,
Care of Lodi Manufacturing Co.,
66 Cortlandt-st., N. Y

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Premiums for Northern Grown Cotton.

One Hundred Dollars are offered for the best five specimens of cotton grown above latitudes 38° and 42°, this year. See particulars in February *Agriculturist*, page 64.

Subscriptions Still Date January 1st.

Unless otherwise specially ordered all new subscriptions received before June 20, will be entered from January 1st, and the back Numbers be forwarded.

Two Thousand for a Dollar! Twenty for a Penny!

Perhaps it may not be amiss to call the attention of those of our readers making up clubs, and of all those kind friends who are disposed to bring the *Agriculturist* to the notice of their neighbors, to a fact or two. Every number of the *Agriculturist* contains from **150** to **200** distinct articles and items, not reckoning the various suggestions in the Calendar of Operations. At the lowest calculation therefore, the current volume will alone contain over Two Thousand different articles, or suggestive items, the whole of which cost but a single dollar, or twenty for a penny. Now can any one fail to find among all these two thousand paragraphs, one or more hints that shall be worth more than a dollar—to say nothing of the amount of general information derived from reading the whole? To test this question, let any one who has read this or any other good journal for five years (or even one year) ask himself or herself, what would be my present information had I been without any of this reading. Our information is accumulating, and our modes of action are being daily changed, without our knowing how or why.

Those Good Premiums

Are still available to all. The descriptions (see page 90) are necessarily cut short in this paper. This month will afford a good opportunity to fill up incomplete premium lists, and to start new ones. The unusually large distribution of seeds will be our small incentive to new subscribers. We think this and the preceding two numbers are a sufficient guarantee that every subscriber will get his money's worth this year, to say nothing of the seeds "thrown in." ☞ Any person hereafter sending in new names not to go on any premium list, may, if desired, order an extra portion of seeds for himself.

A Good Lot of Advertisements.

The advertising pages are *well* filled, both in quantity and quality, and the reader will doubtless be well repaid for looking through the whole of them, to see *what* is offered, and *where*. (They are arranged in the pages somewhat in the convenience of the reader, and one page is likely to be as *new* and as good as any other.) No better or more select class of advertisements, as a whole, ever appeared in any paper. We could have readily filled the whole of this number, had we not shut out that large class who can afford to pay, and advertise most, because they give the least for the money. We scarcely found room for the good advertisements that were up to time—a strong indication of the revival of business hopes.

Note to Advertisers.—We want no advertisements but good ones—those from parties who will honestly do all they advertise to do. Distant parties, unknown to us personally, or by good repute, should send with their favors some indication of their good standing where they are known. In illustration, John Smith, of Western Minnesota, sends a glowing description of a new plant, which he offers at $1 each. We are afraid of him or his new plant, and how are we to know that it is not a catch-penny, or catch-dollar affair? We don't want to be accessory to any imposition upon our readers, and so must return the advertisement and money, though it may be all right. We mean to make our advertising pages as valuable for their selectness, as they are for the number of subscribers which they reach. On this latter point we are happy to say that the receipts of subscribers this year, so far, exceed those of any former year, and that the circulation of the *Agriculturist* is undoubtedly far ahead of that of any other similar journal in the world.

Mail-Lost Numbers Supplied.

It is hard for the Publisher to alone bear all the losses arising from the carelessness or over-sight of any of the 18,000 Postmasters and carriers who have the handling of the *Agriculturist* between the office and the subscribers. But since Uncle Samuel monopolizes the carrying business, and won't stand any losses, and we can't compel him to, we shall cheerfully send a second copy of any number when the first one mailed fails to reach its proper destination, after being notified of the fact. We suspect from the reports, that one of the packages sent to Providence, R. I., last month, has not got there yet. Let us know who are without that Number.

CLUBS

Can at any time be increased, by remitting for each addition, the price paid by the original members—provided the subscriptions all date back to the same starting point. The back numbers will of course be sent to added names.

Special to Postmasters—About Postage.

We have recently received four letters from four Postmasters. Two of these tell us very abruptly they "don't care anything for what editors say about postage;" they "get their instructions from Washington, and not from editors." *Query:* Do they ever learn *anything* from editors? Did they ever ask or receive any help from editors in getting their appointments? Well, as they have appealed to Washington, we have sent their letters there, and they will doubtless hear from them. The other two are polite letters, evidently written by men who are popular and obliging officers at home, though we have not the pleasure of their personal acquaintance. They say, "You are right in announcing that the postage on the *Agriculturist* is *six cents a year* when it weighs 3 ounces or less, but we weighed some numbers on very accurate balances, and when dry, and without wrapper, they still went *over* 3 ounces each. We therefore feel obliged to charge 12 cents a year, paid in advance." This is doubtless so, for after long searching, we have found a copy that weighs 3¼ ounces. It can only be accounted for in this wise, viz.: that at the paper mill, in starting on a new lot, a few sheets of uneven thickness run off before getting the pulp feeder exactly gauged, and whoever chances to weigh copies printed on these few sheets will find them over 3 ounces. We will now state that for years past we have only paid for 44 pounds per ream of 500 sheets (not 480,) which makes 88 pounds for every 500 copies of the paper, there being 2 sheets in each number. A little calculation will show that this is only 2 and 816-1000ths ounces to the copy, or allowing for weight of ink, the weight of each number is *less* than 2 and 9-10ths ounces. As our contract requires the paper to be made of uniform weight, and as the manufacturers would not be very likely to give us over 44 pounds to the ream when we never paid for more than 44 pounds, it is no longer that our numbers will overrun the three ounces, as a general rule. We respectfully ask our friends, the Postmasters, to look into the matter, and try the weight again, before charging beyond the one cent per copy, or *six cents a year*, if postage be paid quarterly or yearly in advance.

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AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

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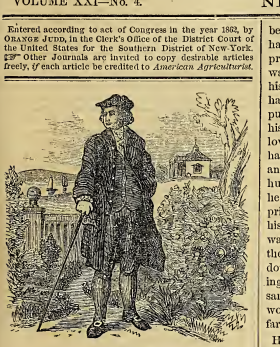


April.

The last words of the Farewell Address of the Father of his country, read in every village and city in the loyal States on the late anniversary of his birth, are still lingering in our ears. "*Relying on its kindness in this as in other things, and actuated by that fervent love towards it, which is so natural to a man who views in it the native soil of himself and his progenitors for several generations, I anticipate with pleasing expectation that retreat in which I promise myself to realize, without alloy, the sweet enjoyment of partaking, in the midst of my fellow citizens, the benign influence of good laws under a free government.*" No wonder that he looked forward with such eager anticipation to his secure retreat upon the shores of the Potomac. Virginia had been the home of his fathers for four generations, and Mount Vernon had been the home of his affections, and the scene of his industries before he assumed the cares of State. Amid all his public cares at the head of the armies of his country during the war of independence, and at the head of the government after peace was declared, he never lost sight of his private affairs. There was a constant supervision not only of the general plan of farm operations at Mt. Vernon, but of all details, extending to the rotation of crops, the planting of particular fields, manuring, tillage and marketing.

Washington was kept so constantly in public life from middle age to his death, that it is very natural that we should know much more of him as a General and Statesman, than as a tiller of the soil. But we find among his papers and letters that he was quite as good at tilling the soil as at any of those tasks to which his country called him. He knew how to plan a campaign in the fields of husbandry quite as well as in the fields of war, and had he never been known as General and President, he would have stood in the front rank of the rural improvers and planters of his native State. It was by his thorough and systematic attention to his own private affairs, that he acquired those habits that made him so skillful a manager of public interests. He was known to the men of his time as the owner of one of the largest and loveliest estates in America, an estate that he had adorned and cultivated with his own hands, and made immensely productive by a system of husbandry of his own devising. It was because he had taken root in its soil, and grown to a princely stature, acquiring wealth and fame by his wise management at home, that he was wanted by the wise men of his time to manage their quarrel with the mother country. We have done well as citizens to recall his political teachings in the farewell address at the recent anniversary of his birth. There are some things noteworthy in his life at Mt. Vernon, to which we as farmers shall do well to give heed at all times.

He was an enthusiastic lover of rural life, regarding the noble art of "*agriculture as the most healthful, most useful, and most noble employment of man.*" It was always a sad day, whenever he turned away from the rich landscape beauty of the Potomac, from the beautiful lawns sloping down to the river, from the winding walks and shrubbery, from the fruit and flower garden planted by his own hands, and from the broad acres rendered productive by his skill, for the artificial life of the city, and the corrupt moral atmosphere of scheming politicians. No day was so joyful to him as that which welcomed him to his farm. Is there not a rebuke here for the multitudes who are turning their backs upon the old homestead, exchanging the plow for the yard stick, a certain and honorable means of subsistence for the golden visions of hazardous speculation? In *his* view, there was nothing like farm life. In *their* view, anything else is better than farm life.

He gave a minute personal attention to all the details of his farming operations, carrying out a well planned system. His Mt. Vernon estate consisted of about 8000 acres, of which over 2000 acres divided into five farms were under cultivation. He did not suppose that the farm would take care of itself, and support him without his planning and management. Sparks, in his biography, says of him, "With his chief manager at Mt. Vernon, he left full and minute directions in writing, and exacted from him, a weekly report, in which were registered the transactions of each day on all the farms, such as the number of laborers employed, their health or sickness, the kind and quantity of work executed, the progress of crops at the various stages of their growth, the effects of the weather on them, and the condition of the horses, cattle, and other live stock. By these details, he was made perfectly acquainted with all that was done, and could give his orders with almost as much precision as if he had been on the spot. Once a week, regularly, and sometimes twice, he wrote to the manager, remarking on his report of the preceding week and giving new directions. These letters frequently extended to two or three sheets, and were always written with his own hand. Such was his laborious exactness, that the letter sent away was usually transcribed, from a rough draft, and a press copy was taken of that transcript, which was carefully filed away with the manager's report, for his future inspection. In this habit he persevered with unabated diligence, through the whole eight years of his Presidency, except during the short visits he occasionally made to Mt. Vernon, at the close of the sessions of Congress. He moreover maintained a large correspondence on agriculture with gentlemen in Europe and America. His thoughts never seemed to flow more freely nor his pen move more easily than when he was writing on agriculture, extolling it as a most attractive pursuit, and describing the pleasure derived from it and its superior claims, not only on the practical economist, but on the Statesman and philanthropist."

Here was undoubtedly the secret of his success as a farmer. No business can be made to pay unless a man will give his close attention to it. If a man holds his lands as a speculation, and is always ready to sell out to the first man who offers him a handsome advance, he can not expect to make money by the culture of the soil.

He not only gave close attention to his business, but he managed his lands skillfully. He was a *progressive farmer*, making free use of books and correspondence, as well as his own experiments, to advance himself in his favorite art. He quickly observed that the system of culture prevalent among his neighbors, was fast exhausting their lands and making them of no value. At a time when they were thinking of abandoning their cultivated fields, he adopted a most excellent system of rotation of crops; and substituting grains, grass, and root crops for tobacco, he soon restored the soil to good condition, and found his income increasing, while his neighbors who pursued the old system grew poorer. Every field was mapped out, and the crops assigned to it, for several years in advance.

How completely this peaceful farm life filled the cup of his bliss, we see in his letter to Oliver Wolcott: "....To make and sell a little flour annually, to repair houses fast going to ruin, and to amuse myself in agricultural and rural pursuits, will constitute employment for the few years I have to remain on this terrestrial globe. If also I could meet now and then the friends I esteem, it would fill the measure and add zest to my enjoyments; but if ever this happens, it must be under my own vine and fig tree, as I do not think it probable that I shall again go beyond twenty miles from them."

Calendar of Operations for April, 1862.

[A glance over notes like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 38° to 45°; but will be equally applicable further North and South, by allowing for latitude.]

Farm.

April with us is not the rainy month it is in England, where the proverb "April showers bring May flowers," originated, and like other proverbs has a foundation in truth. We frequently experience a period covering three to five weeks in March and April of comparative exemption from rain. Our roads become settled, the fields fit for the plow, the ground warm and ready for the seed—in short we have a *seed time*, when grass, grain, potatoes, and carrots, may be profitably put in, and much land prepared for crops. We counsel all farmers to bear this most important fact in mind, and to make good use of this period, which may be short. Remember, too, the cold rains which follow, and often last during the whole month of May, when plowing can not be done, when nearly all the seed rots in the ground, and farmers are busy replanting, or with their hands in their pockets, mourning over the yellow, spindling blades here and there in their corn fields. Some land is never fit for the plow before the first of June, or still later. It is probably too late to begin to do much at draining this Spring; the ground will be too full of water, and time too precious; but it is never too late to see the necessity, and plan for having the work well done.

Barley needs a fair quality of soil; avoid wetness and dryness; set it follow some hoed crop, or sow on sward turned over in the Autumn and manured. Sow when the ground is ready, warm and mellow.

Buildings—The first warm weather should not pass without a thorough cleaning out, and clearing up of the buildings of the farm. Now is the best time for painting and white washing buildings, fences, and the like, no dust is flying, driving storms are not expected, the weather is mild, and the paint hardens before blistering sums.

Calves—When milk is worth more than 2½ cents per quart it is cheaper to bring up calves upon gruel and skim milk than to let them suck the cow. Give, at 2 or 3 days old, new milk warm from the cow, then gradually add a portion of skim milk, and gruel of shorts, rye, oat or barley meal scalded and well soaked.

Carrots—Sow early in deep, warm, rich mellow ground, after some last year's crop calculated to kill the weeds. After rolling, sow in drills 8 and 20 or 24 inches apart, alternately, or 14 to 16 inches apart uniformly. The former method makes the use of certain tilling impiements more available. Use 2 pounds of clean last year's seed to the acre, tested beforehand, and thoroughly rubbed between the hands to prevent several seeds sticking together.

Cattle—It is important that cattle have some succulent food as warm weather approaches—rutabagas, mangels, sugar beets, carrots or cabbages—work cattle and cows both need it. A good currying or carding every day or two should not be neglected. Feed corn meal to both milch cows and oxen. This is the most profitable time of the year and they should lack nothing conducive to their health and comfort. Milk young cows *three* times a day; it increases the tendency to secrete milk and makes them better milkers in the end. Allowing any cow to go with a full dripping bag does not increase its capacity, but diminishes the quantity of milk secreted.

Clover may still be sown on Winter grain early in the month; and now is a very good time to sow it with grass seed where needed on permanent mowings or pastures.

Corn Ground—Prepare early if possible, turning under a good dressing of manure, but do not plant too early.

Cranberries—Prepare wet land for planting in May or June; deep upland soil, full of vegetable mold not subject to drouth, may be planted at this season, and the plants will get well established before dry weather.

Draining—If plans are not made and you are neither ready to break ground, nor yet well under way—walk about over your wet ground and do penance.

Flax—See article on page 107 of this number.

Grain Fields (Winter)—Roll with heavy roller, open dead furrows, and sow nitrate of soda, or guano and plaster, where the plants are puny or partly winter-killed. Go through and pull any docks or other coarse weeds which show themselves. On land very free from weeds, carrots may be drilled in, in rows 3 feet apart, and cultivated after the grain is cut; if the land is rich, a remunerative crop results—a good plan where grain is winter-killed.

Hired Men—Pay a man what he is worth, be generous and friendly in your treatment of him and you secure his love and make it for his interest to serve you honestly and well. Play the master to make him "know his place," and if he knows anything he will find another. A good man costs no more to board than a poor one, needs much less looking after, and is worth double.

Horses—Keep clean by the daily use of comb, card, brush and sponge. Wash their legs, feet and heads after hard labor, and rub them down with straw. It will surely pay. Feed generously; never over work them; be careful of straining them, and never abuse them. Keep mares near foaling in loose boxes, with plenty of bedding and give daily exercise, and some succulent food. Cut feed with meal upon it when horses are first put to hard work induces sweating and galling by the harness. It is better to feed oats at first.

Manure—The sooner it is under ground after removing from the barn-yard or cellar the better. It is much better to apply it very liberally than to till it *in*, than to scatter it over the whole farm. Use plaster, ashes, lime or perhaps guano, or superphosphate where the seed needs moderate encouragement, but do not waste stall manure in this way. Muck or sods and other partially, or easily decomposed vegetable matter, straw, bog hay, and the like, may be composted with one quarter stable manure or 2 cwt. castor pomace to the ton, and it will in 4 to 6 weeks, being twice or thrice worked over in the meantime, be ready for use, and an excellent manure. The addition of some leachings of the manure heaps, etc., will greatly improve it.

Mowings are greatly benefitted by rolling with a heavy roller; do it as soon as the water is off and they will bear the teams. Sow grass seed on thin places before rolling, and apply any top dressing afterwards. Clear of brush, stones, weeds, etc., while the ground is open.

Oats—Sow 2¾ to 3 bushels per acre when the ground is warm. See prize article in March *Agriculturist*.

Onions—Use American raised seed. Sow drills 12 to 14 inches apart in deep, rich, very mellow and warm soil. It is a good plan to sow onion and carrot seed together, and so when the onions are harvested the carrots will have the ground scarified by a harrow, and grass seed sowed with guano. Some such practice often pays well.

Plowing—Study and plan how to have the fewest dead furrows except on wet land, in which case make narrow lands. Back furrowing leaves fields which are tolerably regular, free from dead furrows altogether. It is done by striking a shallow furrow through the exact center of the field and plowing around it. It requires close calculation to avoid carrying the plow far across the ends. Lay out the field beforehand on paper and you will see.

Potatoes—The best success generally follows early planting, even for the main crop. There is a chance also of being able to sell new potatoes at a high price. Where rot is usual, use no fermenting manure, plant on an inverted sod with a little wood ashes in the hill, and plant an early maturing sort.

Poultry, provide boxes of ashes in which they may dust themselves, and if they are lousy add a small quantity of black sulphuret of mercury (black sulphur). Whitewash the hous and clear out the dung before it ferments. In tight houses this fermentation is often fatal to many fowls. Give them as much range as possible, but protect newly made garden beds from their scratching. Keep young broods dry and clean, and do not give a hen more chickens than she can cover while the weather is cool.

Roads and cart Paths—The repairing of these is about the first work that can be done, and nothing adds more to the comfort and good looks of a farm, than well kept roads to all parts of it.

Rye—The Spring variety is seldom sowed, except at the far North. It needs a little better quality of land and more seed than Winter rye.

Sheep—Breeding ewes must be kept separate from the rest of the flock; go through and "tag" the whole flock, removing all the filth adhering to the fleece; the wool saved will more than repay trouble. Provide shelter from rains.

Sorghum is now a standard crop at the West, and is likely to continue so. Prepare the land as for corn. See article in February *Agriculturist*.

Swine—Feed breeding sows succulent food, raw roots or cabbages in moderate quantities, and provide clean pens and abundant litter.

Tobacco—Sow as directed in last *Agriculturist*, a table spoonful of seed to the square rod, calculating a rod of seed bed to an acre of ground. It starts slowly. Prepare Tobacco land by plowing in a dressing of manure or rich compost,—reserving a good supply of the finest manure for a top dressing, that is to be harrowed in just before the plants are set out in June.

Tools—See Calendar in Feb. and March, p. 34 and 66.

Trees—Shade or fruit trees along the highways, and an abundance of fruit trees on the farm, show the good taste and good sense of the proprietor, who thus increases the value and comfort of his farm.

Water—A supply of running water is most valuable at the house, dairy, barn and stock yard. A pasture should have a constant supply. Springs, wells, rams, and windmills should be investigated, and some way provided for easily getting water at all times and almost every where.

Wheat—Plow for Spring wheat as early as the ground is dry enough, put the selected seed to pickle and soak some days before hand. Dry with slaked lime or plaster, and sow from the first to the middle of the month. See article in February *Agriculturist*.

Orchard and Nursery.

Tree buying and planting will be in order during this month. Early planting is desirable where it can be done. The roots suffer less if moved while still dormant. The ground settles about the roots, and the trees become established and commence growing before dry weather sets in. Look through the neglected or failing orchards, and see if there are enough recent plantings to make good the places of those trees which, after yielding well for half a century, are yielding to age. If not, by all means set out an assortment of apple, pear, cherry, and plum trees, before other Spring work presses. The prices of all kinds of orchard fruit have been sufficiently remunerative, during the past Fall and Winter, and for years past, to satisfy the most doubting that fruit growing pays well.

Give the old orchards a top-dressing of manure; a liberal dressing of slaked lime, or wood ashes, or both, spread about the roots will greatly promote vigor and fruitfulness. If pruning has been neglected, remove nothing in the apple orchard but dead branches and small sprouts at this season. Leave no brush heaps or loose stones scattered about. If the trees are generally failing it is better to begin a new orchard elsewhere rather than keep setting young trees in the places of old ones.

Drains in Orchards—Use rather large tiles, and lay them not less than 3 and if possible 4 feet deep. There is much less likelihood of roots stopping them up. Cover them with gravel or stones, to discourage the roots in their search after water or nourishment. Drains are of incalculable value on much land used for orchard purposes, particularly for peach and stone fruits.

Dwarf Pears—When well set and cultivated—are most desirable. They need as careful tillage as corn during the Summer, and must be sensibly pruned. Set out only those kinds which do well dwarfed, and which are known to succeed well in your vicinity, unless you choose to make experiments for the good of your neighbors. Select trees having one main stem, branching very low and of as conical a form as possible; some trees will not readily grow in the form of a cone, like the Winter Nelis, still the nearer they conform to it the better. The dwarf pear is an artificial thing, and must grow as we choose.

Grafting may properly be done early in the month. If the cions have not already been cut, secure them at once for it will be too late when the sap starts, unless they are selected with great care and inserted immediately. Cherries and other stone fruits if grafted at all must be at tended to very early in the month, and the cions removed from one tree and immediately inserted in the stock. Graft stocks in which buds failed or have been broken out.

Grapes—The vine so much neglected hitherto is now receiving the attention it merits, in almost all parts of our land. We have a few sorts which are adapted to culture every where, and the grape may be enjoyed by every one who owns or leases a square rod of land, from Maine to Texas. The soil should have been prepared last Autumn, decpened, enriched, and exposed to the frosts of Winter. If not done, dig large *holes*, or better, make a border 20 inches deep. Put the rich surface soil at the bottom, thoroughly mixed with any well rotted compost, and fill up with other surface soil from an old pasture or elsewhere. Above 41° of latitude select, Delaware, Hartford Prolific, Concord, and Diana—all good table grapes. Below this parallel of latitude the same thrive, and we may add, Isabella and Catawba. (See also article on page 116.) Clip off bruised or broken roots, and as a general thing, if the roots are abundant, reduce them to about a uniform length, so that they may be easily spread out in planting. Cut the tops back to two or three good strong eyes, plump and healthy. You will allow only the best one to grow. Put no manure in contact with the roots in planting, and set a good stake close by for protection now, and to tie the vine to when it grows. All the grapes named are hardy and gross feeders, except the Delaware, the best of all; this must not be set near any of the others or they will rob it of its food, and it will starve almost. It needs a rich soil, and the more it is pampered the better it rewards the husbandman.

inarching or grafting by approach may be performed so soon as the young wood begins to form, that is, when the leaves mature and perform their functions.

Insects—In going about among fruit trees, be constantly on the look-out for caterpillar eggs. They can readily be detected, gummed upon the twigs of the size of a quill and upwards. Pick them off and burn them. Remove any cocoons found in the branches, or under the rough bark; they are all nests of insect enemies.

Seeds of fruit and ornamental trees may be planted so goon as the ground can be worked, and is warm.

Nursery stocks budded last year, and not cut back, should now be headed down within two eyes of the bud. Plow out the rows as soon as the ground will admit, and remove the earth banked up against the trees last Fall. Begin early to transplant seedlings and stocks, and push the work vigorously as soon as the season fairly opens.

The nurseryman who has a stock of trees and plants ready for sale, should make arrangements to fill orders with all possible dispatch. Label carefully and truthfully.

Quince Stools, and those of ornamental shrubs used for propagating, may be dug about, manured, and the last season's growth layered as soon as the sap starts vigorously; it is best not to do it before. Such layering is now chiefly performed in August, when the wood is half ripe.

Stocks of all sorts for budding should be planted out early, to get a good growth for budding next Summer.

Trees most likely to thrive when removed are not those grown in deeply trenched and manured ground. Their roots are too long and wandering, unless they have been often shifted and root pruned. A moderately deep, hard soil, well manured and mellow on the surface, promotes the growth of a mass of small roots, which hold the earth, and such trees sustain moving much better than others.

Kitchen and Fruit Garden.

The most profitable labor expended on the farm is laid out here. But few farmers realize it. Their good wives know the value of the garden and its products, and we know this column will find among them careful readers. If you cultivate nothing else, have a good vegetable garden. Our language lacks an important thing in having no word for kitchen vegetables. So "truck" and "sauce" and "sass" are used, but without "authority." We are too much meat and meal eaters, and though we can hardly lay our lack of taste for vegetables, to our vocabulary, it is most important both in point of economy, health, and enjoyment of life, that we, farmers particularly, provide more and better fresh vegetables for our tables throughout the year.

The garden spot is better if underdrained thoroughly, the drains 3 to 4 feet deep and 2 rods apart; the soil deepened by trenching or deep plowing. For a large garden use the double Michigan swivel plow if you can. It leaves no dead furrows.

Artichokes—Remove suckers from old plants, strip off dead leaves, and plant in well dunged beds, 2 feet apart. Leave one, two, or three suckers on the old plant, according to the strength of the root and the soil. Seed may also be sowed at this season. (Do not confound with the "Jerusalem artichoke" which is a kind of sunflower.)

Asparagus—Fork in manure if not already done. Salt beds two years old. In cutting, use either an Asparagus knife which has a curve in the blade, and a long handle, or a long narrow bladed sharp knife, and cut 3 or 4 inches below surface, carefully not to hurt other sprouts, the growth of which is promoted by deep cutting.

Beans—Prepare poles. When new ones are procured it is advisable to soak at least the large ends, after sharpening and trimming, in a dilute solution of blue vitriol, several days or weeks even. They will last more than twice as long for it. Sow bush beans (early valentine or early six weeks) towards the last of the month.

Beets—Sow early in rows a foot apart; use plenty of seed and thin out for greens when the plants crowd. The early Bassano is the best sort for Summer use, and the Long blood for Winter.

Borecole, or Curly Kale—A plant of the cabbage kind used as winter greens. Sow and treat like cabbage. It bears the winter unprotected around New-York and much further north. Plant where it can be protected from game, which love its green leaves in Winter. See article on page 109.

Broccoli—Sow and treat like cabbage; there are early and late varieties. The flower, in a compact head, like cauliflower, is eaten.

Brussels Sprouts, or Rose Cabbage—It bears on a tall stalk multitudes of little cabbage heads like cabbage *roses*, very delicate. Sow early and transplant like other kinds of cabbage.

Borage—Sow for greens early, in dry soil, broadcast or in drills. To those who like this plant, it furnishes excellent summer greens. The flowers are showy.

Cabbage—Sow seed in open ground at any time, after the soil is warm. Transplant from hot-bed or cold frames for earliest crop; set 1½ to 2 feet apart. Early York is earliest. The Winningstadt far superior but a little later. Early green Savoy, a very desirable sort. Sow late varieties last of the month for late Summer and Autumn use; later sowing answers better for winter cabbages. Avoid the use of hog manure or any fermenting manure, or sowing where cabbages grew last year, if you would escape insects and club-foot.

Cauliflower—Treat like cabbages. There are early and late kinds. Early Paris and large late London are good sorts. They are the most delicious and delicate of all the cabbage family.

Carrots—Sow early in well prepared soil, in drills 1 foot apart. Mix the seed with double its bulk of fine dry soil or peat, to be able to sow it more evenly. For early use sow Early Horn, scattering the seed in a drill 2 inches broad. It is a very short and small variety, sweet and mild flavored, which bears crowding in the rows, thinning out as wanted for use during the summer, and is fit for the table as early as green peas come. This variety is equally good in winter, but the Long Orange is preferred because it yields better.

Celery—Prick out from the hot-bed to make stout plants for summer use. Sow seed in warm, very rich soil, in drills 6 inches apart for plants for main crop. The red varieties are most solid; the solid white more delicate; the Giant kinds are almost always hollow and pithy.

Celeriac—Sow as directed for celery, and if sown early, prick out in the same way.

Cardoons—Sow in warm mellow soil for transplanting into drills in June, where it can be bleached.

Chervil—Sow at intervals; it is used in soup.

Chives—Plant single bulbs 8 to 10 inches apart in borders.

Cold Frames, leave open except when very cold or rainy.

Cress (Garden cress, or Pepper grass)—Sow as early as possible, thickly in rows 6 inches apart. The early leaves are fit for a salad or relish in a very short time.

Cucumbers—See Calendar for March.

Egg Plants—Sow purple variety in hot-bed early, give considerable heat at first. The young plants are very sensitive. White egg-plants, are pretty but not worth cultivating except for ornament.

Garlic—Little used in American cooking, but desirable. The flavor is different from that of the onion. Sow seeds in rich mellow soil, or set out subdivisions of the bulbs, six inches apart.

Hops in the kitchen garden soon become a nuisance. Set a young vine, taken from the roots of a fertile plant, in some out-of-the-way corner in rich soil, and provide good tall poles, and a supply for the family will be had without further trouble.

Hot-Beds for farmer's use are quite as servicable made the first of this month as earlier. If the ground is dry, fill with the well turned and mixed horse manure—a pit 14 inches deep, and six inches all around larger than the frame. Make the frame of 1½ inch stuff—1 foot high on the front or south side, and the back high enough to allow the rain to run off freely from the sashes, which are usually 2½ to 3 feet wide and 5 or 6 feet long. Set the frame upon the manure, and spread evenly 4 inches of mellow soil. Put on the sashes and when a good heat is raised and the soil settled and leveled, it is ready for the seeds of early cabbage, cauliflower and the like, lettuce, tomatoes, peppers, egg-plant, radishes, etc.

Horse-radish—Dig for use, saving the long ends of roots and the branching crowns for re-setting; plant with a dibble in deep, rich, moist soil, 8 inches apart, in rows 14 inches apart. Almost any part of the root will grow.

Kohl Rabi—Sow in hot-bed early, or later in open ground, and treat every way like cabbage.

Leeks—Sow when the soil is warm; the seed may be mixed with onion seed, and the plants treated alike until the onions are pulled, when the leeks are left to grow.

Lettuce—Sow in hot-bed, and in the open ground, as early as possible—transplant to give room to head. In the former it will come forward and mature very rapidly. Stir the soil about the plants. Neapolitan cabbage, (Seed list 147) is a superior variety. Victoria cabbage, Mammoth India, and Curled Silesia, are all good.

Manure for the garden should be fine, well rotted, free from weed seed. If half muck, having lain in compost heaps all winter, so much the better. *Liquid manure*—Sink a barrel or half-hogshead tub in an out of the way but convenient place, to receive house slops and other liquid manure. Keep it well covered, and make frequent use of it to prevent putridity.

Mustard—Sow white variety in boxes (see page 101,) or in the open ground at any time for salad or for greens.

Mushrooms—Prepare manure for beds under cover, and procure spawn. It is commonly best to start mush room beds at this season.

Melons—Sow choice varieties of musk melons in hot-bed as directed for cucumbers. No. 76 of the Seed List is a good variety also Green citron, and almost any variety of Nutmeg melon.

Nasturtiums—Sow the yellow flowered, where the vines will have a fence or wall to ramble over and where the showy flowers may be seen, enrich well; sow last of April.

Okra—Sow after fear of frost, in drills 2 feet apart.

Onions—Sow white or yellow early in rich ground. See directions under Farm Calendar. *Potato onions*, best of all for the table, planting in mellow rich soil, one foot apart each way and keep the ground loose and clean. *Top onions* (rare-ripes) set 3 inches apart in rows 8 to 10 inches apart. The small bulbs raised from late sowed seed may be used in the same way.

Parsley—Cultivate the curled variety. Sow early in drills half an inch deep, on the border of vegetable beds, for which it makes a neat edging.

Parsnips—Sow in rows 14 inches apart, in very deeply worked and rich soil; the seed starts slowly.

Peas—Sow in succession, as soon as the last is well up. Let the Champion of England be your reliance. Dan. O'Rourke and Tom Thumb, (the latter dwarf,) and several others, ripen considerable earlier. Bush as soon as 3 inches high. See directions given last month.

Peppers—Sow in hot-bed or box, to transplant in May. There are many varieties used green for pickles, etc. The Large Bell for stuffing, Bullnose or Sweet Mountain for simple pickling, for which also the cherry is used; and the long varieties of all sizes used ripe for making Cayenne or red pepper and "pepper sauce."

Radishes—Sow in light sandy soil in a warm place, at intervals; water with liquid manure to force a rapid growth. The seed may be dropped in the ends of rows, or in any vacant spot, and a good return gained.

Rhubarb—Obtain tender thin skinned varieties for planting. Cover old crowns with a barrel with one head out, a tender blanched growth will result.

Salsafy (Oyster plant)—Sow early and cultivate like carrots. It needs deep tillage and rich soil, stands out over winter, and is excellent in spring.

Scorzonera (much cultivated in Germany, and called Schwarzwurzel,) is similar to salsafy; treat in a similar manner, but sow later.

Sea Kale—Sow seeds thinly, but in drills an inch deep, and a foot apart, to secure crowns for transplanting next Spring. Set roots two inches below the surface, two feet apart, in well manured sandy soil, worked eighteen inches deep, well dressed with salt.

Seeds—So far as possible test all before using, sowing them on wet cotton in a glass, or in moist soil kept warm. In sowing be careful to cover with fine soil and not lumps of earth. Burying seeds about an inch below the surface of the soil spread out between pieces of cloth, or put into cloth bags, is a very good way to sprout many kinds before sowing.

Small fruits that find a place in the kitchen garden such as currants, raspberries and gooseberries must be pruned and the soil, if to be not already done, and dug about and manured. Paving or spreading oyster or clam shells under gooseberries it is said prevents mildew.

Strawberries—The present is a good time to set out new beds, and to obtain new varieties, for propagation.

Spinach—Remove covering and use as wanted. Sow for successive crops in drills a foot apart.

Squashes—Plant summer squashes of dwarf sorts in hills 4 feet, the running sorts 6 feet apart. If the land is not quite rich put manure under the hills. Winter squashes need rich soil and room to spread; put the hills 6 feet apart, and manure in the hill. Hubbard and Boston Marrow and Crookneck are excellent standard varieties. No two varieties of cucurbitous plants should be raised near each other. The seed is not reliable if any two kinds are raised on the same half acre.

Tomatoes—Sow in hot-bed to transplant in May. When protection can be given, early plants may be transplanted in this month. Lester's Perfected and the Fejee, are both good varieties.

Sweet Herbs—Divide the roots of Sage, Lavender, Thyme and Rue. The mints of all kinds of Balm, etc., may be propagated by dividing or from the ground shoots which have rooted. Sow seed of Basil, Summer Savory, Clary, Sweet Marjoram, etc., where the ground is warm, in drills, near or further apart according to the plant.

Sweet Potatoes—See article on page 108.

Tools—It is important to clean garden tools as often as used, and as soon as they are laid out of the hands. See article on garden tools, page 116, and secure good ones.

Turnips—Sow early Flat for Summer use in light soil.

Winter Cherry—Sow in hot-beds or open ground and treat like tomatoes; they require scarcely less space.

Flower Garden and Lawn.

The love of flowers is as natural to a man as is his breath—but alas! the love of profit that may be counted in dollars and cents, leads too many to overlook the enjoyment which springs from so much purer and higher a source. A little taste and care, with a very little expense of time or money, will make the surroundings of the humblest cottage most attractive and beautiful; and the wealth of the Indies may be lavished for years upon glass houses and gardens, and still we shall have but just begun to see with what varied, delicate and gorgeous beauty of the floral world, nature will reward our care. Every one may have flowers.

Before laying out a new place, provide for a liberal garden spot, give it a warm sunny aspect, some shaded nooks, a good, well drained soil, and allow it a good share of manure. The soil must be well worked, mellow and free from weeds—But some nice flowers grow anywhere.

Annuals—Sow hardy sorts such as mignonette, portulacca, candytuft, phlox, coreopsis, daisy, clarkia, and larkspur of our seed list; also scabious, nemophila, eschscholtzia, hibiscus, etc. They require less covering when sown early in the season, and are often put too low in the soil. The more delicate the seeds, the finer should be the earth with which they are covered. Asters, petunias, balsams, gillyflowers, etc., may be sown in hot-beds, to be transplanted next month.

Borders are the first portions of the garden to be dressed, manured and put in order for the season.

Box Edgings—See directions given last month.

Bedding Plants—Harden them by free circulation of air in the houses or frames during this month.

Bulbs—Plant out those which have bloomed in glasses. Remove any covering or mulch allowed to remain until now. Hyacinths, tulips, and other imperials, as they come in flower, should be neatly staked up.

Carnations and Picotees—Harden those in pits by exposure, and plant out when the weather is settled.

Climbers—Prune and train Honeysuckles, Woodbines, Wistarias, and other woody climbers, and plant others.

Dahlias yield the finest bloom in the cool weather of Autumn. Hence it is not desirable to plant many before May. A few may be put in to secure sprouts.

Dicentra (Dielytra), a most beautiful flower in the border. Plant out and divide roots.

Draining—This is the best time to drain many gardens. Lay them under walks where the ground is at all wet.

Evergreens—Arbor Vitæ and Norway Spruce may be transplanted freely at this season; others in May or June.

Frames and Pits—Ventilate freely to harden off the plants and prepare them for setting out. Transplant from them in warm localities, when the weather has become mild and settled. If not too crowded, they will flourish best in boxes, until the open soil is dry and warm.

Flowering Shrubs—Plant the althea, flowering almond, azalea, chionanthus, flowering currant, deutzia, euonymus, holly, Japan quince, laburnum, lilac, pinkbells, phlox, rose acacias, snowberry, snowdrop, spiræa, tree peony, weigelia, etc. Early flowering shrubs give a finer bloom if transplanted as soon as ground is in working order.

Gravel Walks—Add gravel to old and new walks as needed. Clean out any weeds or grass, cover with gravel, rake smoothly, and press down with heavy roller.

Hedges—Set out privet, althea, hawthorn, Arbor Vitæ, etc., for hedges. Osage Orange and honey locust are of too rampant and coarse a growth for handsome screens or protection around dwellings and pleasure grounds.

Labels and Stakes—Provide an ample supply.

Lawns—Sow grass seed on thin spots, scarifying with a sharp rake, and roll. Top dress with guano water, or ammoniacal water from gas works, or with Chili saltpetre, ashes, plaster or superphosphate. Instead of a mixture of seed as formerly preferred, a single sort is now recommended, so that the lawn may present a uniform hue.

Manure heavily all the borders and flowers plots.

Perennials and Biennials—Plant seeds of Canterbury bells, forget-me-not, standing cypress, dwarf blue larkspur, and foxglove, of our seed list, and other hardy biennials and perennials, when we have settled weather and a warm soil. Some of these, like pansies and forget-me-nots, bloom the first season. Also divide and re-set, or plant out pinks, sweet williams, pœonies, lilies, phlox, etc.

Petunias and Verbenas—Procure rooted plants from florists and set in masses. Sow seed in the hot-bed.

Roses—The almost endless variety of monthly, remontant, and common sorts, enables the cultivator to secure a rich profusion and constant succession of bloom. Purchase and set out blooming plants, and such only as have a good reputation for hardiness and free blooming. The Remontant, sometimes called Hybrid Perpetual, will give good satisfaction. Plant out, prune and tie those trained to trellises or pillars. Uncover tender varieties buried or tied up last Fall when danger of frost is over.

Shade Trees—Plant deciduous sorts early. Many of our choicest fruit trees are beautiful as shade trees, for instance, the bigarreau cherries, the crab apple, and pears growing in uniform pyramids like the Buffum.

Tender shrubs and vines which were strawed up, or otherwise protected last Fall, may be uncovered. It is best to loosen the straw before removing it altogether.

Vines and Climbers—Plant bignonia, clematis, honeysuckles, ivy, trumpet flower, Virginia creeper, wistaria, moneywort, etc., and arrange on permanent supports.

Green and Hot-Houses.

As most of the plants will be removed to the open grounds next month, care should be used to harden them off in April. Dispense with fire in the Green-House when possible, and keep ventilators and doors much open. Forcing houses also require much less heat, and more air.

Bedding Plants—Propagate (by cuttings, and dividing roots,) an ample stock of verbenas, petunias, geraniums, daisies, pansies, salvias, heliotrope, fuchsia, heliotropes, etc. Expose by degrees to gradually harden them.

Camellias past blooming, should be pruned and washed.

Cuttings—Increase stock by cuttings. In the commercial house it is especially needful. Fuchsias, geraniums, myrtles, hydrangeas, camellias, jasmines, salvias, and most other plants will strike freely under glasses, with a sandy bottom heat.

Fuchsias—Increase the stock of this elegant flower by inserting a large number of cuttings.

Prune and head back all feeble stunted plants, or those of straggling or undesirable growth.

Insects increase rapidly, if not early checked. Hand pick, fumigate with tobacco, syringe with oil-soap water.

Seeds of desirable green and hot-house plants, such as geraniums, aloe, cactuses, ice-plants, euphorbias, cineraria, etc., etc., may be sown now in pots, plunged in the bark-bed, and covered with bell glasses, or in their absence with a pane of glass laid over each pot.

Shifting—Repot plants needing more room, cutting away diseased roots. See illustrated article, page 117. Give fresh earth to plants that do not require repotting.

Water freely, rapid growing and succulent plants; they require more than woody sorts. Add a very little guano or carbonate of ammonia to water for lagging plants.

Grapery and Orchard-House.

Grapes ought to be growing finely now; new shoots should be tied up as they extend. Those in earlier houses have already set their fruit, and the berries are of sufficient size to require thinning. Cut back the laterals above the bunches to three leaves, and remove shoots between the bunches and the main cane. As the berries swell, support the shoulders of the bunches by tying to the canes above. Syringe freely, adding sulphur to the water to prevent mildew. Vines which have only burst their buds, need to be kept horizontal to start evenly.

Mildew can be prevented by the free use of sulphur.

Peaches, Apricots and Nectarines—Remove superfluous shoots, and pinch in to prevent rampant watery growth. Thin out the fruit where it needs it.

The orchard house or grapery is often an excellent place to bring forward strawberries, string beans, etc.

Apiary in April.

Prepared by M. Quinby—by request.

Bees will now begin to bring in pollen; but a steady supply is not certain. On cloudy or chilly days the bees will not venture out; and a severe frost may destroy all the flowers for a time. The morals of our little favorites in such times are apt to suffer. Idleness with bees begets mischief, war and pillage. The "flour feed" may advantageously be given to keep them employed. But they will refuse to take it altogether very soon. Scrape the filth from the floor of the hive. See if there are clusters of dead bees among the combs; such should be removed. If they have remained long enough to mold, take out the comb, as far as it extends as well as the bees, quieting the bees with a puff of smoke occasionally. Colonies that are out of honey, can not be expected to obtain supplies from the flowers yet, for they get little else than pollen, and this will not sustain the old bees; they should be fed as required with honey or sugar syrup. Feed often, in small quantities, two or three times a week. Put it on the top of the hive or breeding box, open the holes and cover it close with a box, to prevent robbers having access. Do not feed promiscuously by setting honey where all can take it. It induces contention among the bees at home, and entires those of neighboring proprietors. Robbing may occur any warm day; on warm evenings they continue operations until dark, when it can be readily detected. You can also see where the honey is taken—most likely into the strongest colony in the yard —but one is stealing change the stands, setting each hive where the other stood. As it will be impossible to do this when several are engaged, it will be necessary to carry the one being robbed to some dark room, until several warm days have passed, when it may be returned, or take it away a mile or two, until all danger from further attacks are over. Keep the entrance to all weak hives properly contracted during this month. The moth worm may be found on the floor of the hive in considerable numbers; sweep out and destroy them all. Put up a wren box near the apiary, for such birds will pick up a great many of the worms, and will be on the look-out for them when you are away.

Many who have not the movable comb hive will want to procure Italian bees this season, and to know how to transfer from the old box to the movable comb hive at once, and not wait for new swarms with which to do it. Complete success with Italians can hardly be expected without some of these hives. The present season is perhaps as good a time as any to make the transfer, for there are fewer bees than at any other, and not much brood in the way. The directions given last year are about here. Select if possible a hive with straight combs; blow up into it a few puffs of smoke to keep the bees quiet, and carry it to the apiary. Invert the old box, and place all the bees that will go readily into an empty hive—one of the same size if possible, or made comfortably warm. Now pry off the side of the hive, and cut out the first comb, and lay it carefully, without bruising, on a few thicknesses of folded cloth. Lay over it the frame into which it is to be fitted, and marking the exact size, cut and trim the comb to fit into the frame; put it in and keep it there by winding twine around the whole. Straight combs are readily held in this way, but crooked ones will need narrow splints or sticks to hold the ends where they project. Keep the filled frames upright. All the combs as they are fitted and put in the new hive, should be in the same relative position as before, if possible, that the brood may be together and be protected by the bees. When all is arranged, the hive which have been shut up may be shaken out upon the top of the frames, and covered with a close box to keep them from flying, until they find the combs. Set it on the old stand, and the bees as they may be returned to the stand. Such bees as are on the windows, may be brushed into a box and shaken on the frames after the rest are put in place. If the day is pleasant, the window may be raised and the bees swept out, and they will return to the stand without trouble. Avoid opening the movable comb hives on cold mornings, or in chilly weather, lest the brood be injured. It is not safe either to open them in the middle of the day, as large apiaries when the bees are flying, as it might induce robbing any time before the flowers yield a full supply of honey. The best time appears to be just before they begin work in the morning.

Agriculturist Exhibition Tables.

GRAIN AND SEEDS.—Collection of Corn, W. S. Carpenter, Rye, N. Y.....California White Wheat, Mr. W. H. Ranlett, N. Y.... Rice Corn, Hiram W. Sutphen, Prospect, N. Y.....Sweet Corn (Seneca) yellow and white ears, and white Corn (Seneca) yellow Corn on grass land, with little manure, 150 bushels ears per acre, C. L. Bassett, Derby, Ct.. White Flint Corn; ears 14 inches long, 40 rows, and ears 11 inches long, 14 rows, A. P. Fonda, Paterson, N. J.... Guinea Corn and Red Onions, Willis J. Young, Oyster Bay, L. I.... Virginia Coffee or "Chick Pea" (*Cicer Arietinum*), O. Judd, Flushing, L. I. ....Large Pop Corn. Mr. Chase, Lockport, N. Y.....12 14 and 16 rowed Corn, Geo. Jas. P. Flint, Bloomfield, Conn.....18 rowed Red Corn, M. Pryer, Bowery Bay, L. I.....Scioto Corn, R. B. Sutton, Guilford, Conn.

FRUITS.—Winter Cherries (*Physalis Viscosa*) and Iron Apples, G. B. Hummelbaugh, S. L. Allen, Northern Spy Apples, and several seedling varieties, W. S. Carpenter, Rye, N. Y.....Rocky Mountain Currants (Varieties,) and Rocky Mountain Raspberries preserved in cans and bottles, J. B. Wolf, Denver City, Col. Ter.....Admonished Pears, Mr. Cornell, Flushing, L. I.....Apples—American Russet, Meadow Sweet, G. H. Banta, Tappantown, N. Y.....Iron Apples, G. Usher, Port Richmond, S. I.....Preserved Black Currants, Ebenezer C. Wheeler, Fairmount, N. J.....Pods of the Tamarind, by a Volunteer, Key West, Fla.....Chestnuts and Hickory Nuts, very fine, Geo. Smith, Walnut Creek, Ohio.

FLOWERS, ETC.—Beautiful bouquet of Skeletonized Leaves, Flowers and Seed Capsules, W. P. Heins, Woodstock, N. Y.....Beautiful bouquet of Dried Flowers, Everlasting Flowers, Grains, etc., from the same exhibitor....Everlasting Flowers, Mrs. Bushing, L. I.... Cut Flowers, Pansies, Violets, etc., fine, Mr. Cummings, N. Y.....Parlor Green-Houses, containing Ferns, Mosses, Lycopodiums, &c., Publishing, L. I.....Mrs. Cone.

IMPLEMENTS, ETC.—Mole Trap (the best we have seen, W. Norton, Heightstown, N. J.....New Flour Sifter, John VanGenthi, N. Y.....Model of Rotary Digger, J. S. Stevens, Coe's Corner, N. H.....Model of Reel, Halsted, Bye, N. Y. Fruit Baskets. J. R. Parks, Marlboro, Ulster Co., N. Y.....Model of Step-ladder, E. J. Swords Jr., Portchester, N. Y.

MISCELLANEOUS ARTICLES.—Oysters growing upon and showing strong attachment to a champagne bottle found in the sand, Mr. Feltheus, Bay Ridge, L. I.....Sorghum Molasses, John Manwearing, Mendota, Ill.....Bust of Washington, Thos. Keating, N. Y.....Chinese Opium Pipe, C. Hafra, N. Y.....Live Hen Hawk, M. Fleshham, Bay Ridge, L. I.....Corn Bread and Johnny Cake, Mrs. Haring, Monroe, Co., N. Y.....Cotton Bolls from Port Royal, S. C.....Cotton grown by Martha Yakey, Oakfield, Perry Co., Ohio.....Green Curled Kale, O. Judd, Flushing, L. I.....Dyfeman Potatoes, fine, S. B. Conover, West Washington Market, N. Y.... Vegetable Ivory Nuts. Mr. Chase, New-York.

Containing a great variety of Items, including many good Hints and Suggestions which we give in small type and condensed form for want of space elsewhere.

The Seed Distribution Soon to Close.—Owing to the cheaper postage, we provided nearly double the usual quantity of seeds, yet so great has been the call for them that the applications already in will nearly or quite exhaust many varieties, which can not be replaced this year. Any future applications should give a dozen or more numbers and we will send four or five parcels of such as we have left, beginning at the top of the list of numbers received. So far we have had our assortment full, except No. 215, of which we only received a very small part of our order, owing to its scarcity in Europe, and none can be obtained in this country, except in small retail parcels. All applications for seed to this date (March 20) will be sent off before March 31, and those previously applied for together with the express parcels, will go the first week in April. A few errors may occur in sending off half a million parcels to so many different persons, but our system is so perfect that very few mistakes can occur on our part.—We are sorry to report, however, that about 50 envelopes are defective in the address (name, or P. O., or State,) or in list of numbers. We must of course suffer for a supposed lack of good faith, for we can not even write to explain, as there is no means of telling where to direct a letter. The name is sometimes given with nothing more, but except in chance cases, we can not remember to which of the 17,000 post-offices in our books we must look for the name.—New subscribers hereafter coming in will be presented with the usual four or five parcels if a list of 13 or 15 numbers be sent to us to select from.

The "War Maps,"—We presume no excuse is needed for occupying so much space with Maps of the sections of our country occupied by the contending armies; the very great number of references to those already given, and the calls for more, indicate that they are just what is most acceptable to nearly all of our readers now. The map on page 121 gives a general and connected view of the Eastern section of the country, (see note in corner of map;) while the two maps on pages 124 and 125 give, on a large scale, two localities which are of present interest, *McClellan's* Division between *Washington* and *Richmond*, and *Burnside's* Division in *North Carolina*. The map in the *November Agriculturist* showed *Fortress Monroe*, and *Norfolk* and the vicinity; and the map in *February*, an enlarged section of the Coast and Bays of North Carolina. The map last month (*March*) showed the whole country between the Ohio River and the Gulf of Mexico, including the *Mississippi River* and *Valley*, *Nashville*, *Pensacola*, etc. The *November* number shows very fully the *States of Missouri*, *Kentucky* and *Tennessee*. The *December* number shows *Port Royal*, and *Beaufort, S. C.* In the *January* number are given enlarged maps of *Savannah*, *Fernandina*, *New-Orleans*, and a beautiful section map of the *Mississippi River from Cairo to Memphis*, including *Columbus*, *New-Madrid*, *Island No. 10*, *Randolph*, etc. Those who have preserved their copies can readily refer to nearly all points of interest. Any one of the above numbers missing can be supplied at the usual rate (10 cents).

The Crop-Report Statistics, proposed last month, page 73, promise to be very valuable. Farmers' Clubs, and many public-spirited persons, are taking hold of the matter. It is a project in which the whole country is deeply interested. Let us have names from every locality not yet reported. The blank tables will be distributed about the middle of April.

The Premiums,—The General Premiums on page 122 are all continued. We hope our readers will find many who will yet feel the need of the *Agriculturist* as the Spring work opens, and will feel able to take it, now that the prospects of the country are appearing so much brighter. Premium clubs may yet be filled up and new ones still be started for the present year

Who and Where ?—As a sample of others, here is a letter which speaks of 10 cents for a "Sept. No. 1858," etc. *But there is no name, or date, or legible post mark, any where on or in the letter, or in it,* to give the slightest indication *where* it came from, or *who* sent it. We are of course meekly waiting for the expected scolding.

The Advertisements Worth Reading.—Another large list of good advertisements will be found in this paper—almost all of them new ones. The necessity of printing the maps on one side of the sheet, has divided up the advertisements somewhat, upon five or six pages (123-4-5-6-7). Answers to many questions addressed to the Editors can be found in the advertising pages themselves. We take the more pleasure in thus referring to these business pages, because they are pretty thoroughly sifted. It sometimes "goes agin' the flesh," though good for the spirit, to refuse ten, twenty, fifty and even hundreds of dollars, for an advertisement that shows well on its face, but may *possibly* cover knavery.

Book Questions.—On our table are at least a hundred queries about books on agriculture, animals, fruits, flowers, and other topics, their cost, etc., answers to most of which can be found by referring to the starred list (*) on page 125.

Cotton Seed.—To numerous inquirers: We do not know of any large supply of the Upland seed in this vicinity. The seed stores sell it out by the pound, at about 25 cents per pound, to which 17 cents must be added if to be sent by mail. We laid in only enough for our seed distribution, last season. The Sea Island (smooth) seed is plenty, but not wanted for practical cultivation in the North. We put a little in our seed parcels, to be grown as an ornamental flower.

Pure Sugar Cane Seed Not Obtainable.—Answer to many inquirers: We are sorry to report that we can get no good seed, *known to be pure*. We ordered **2,000** pounds from France, if positively *pure* seed could be obtained; but our correspondents answer that, after diligent search, both in France and Algiers, they cannot secure any *known* to be unhybridized. Large quantities, supposed to be good, have been sent over here to different parties, but none of it could be warranted so. The same carelessness has prevailed in France and Algiers, as here. New importations will be made direct from China against another season. Our readers will be obliged to use the best seed they can obtain, and then trust partly to chance for its good quality.

Appleton's Cyclopædia.—Another volume of this noble American work is now upon our table, fresh from the press—(American Cyclopædia, vol. XIV., from REED to SPIRE; 858 pages.) This volume seems to be prepared in the same thorough manner as the previous ones. A few of the topics, noted at random in running over the pages are: Reformation, Reformed Dutch Church, Religious Orders, Reptiles, Resins, Respiration, Rhododendron, Rhubarb, Rice, Richelieu, Rickets, Rifles, Rye, Rome, Rose, Russia, Salt, Sardinia, Sardines, Sculpture, Sewing Machines, etc., and about 1,500 others. With us this Cyclopædia is a necessary companion—a *vade mecum*—consulted daily, and almost hourly. We would be glad to see it in every family. A few more may, perhaps, yet get it through our premium offers. See page 122.

Coffee Humbugs.—We advise our readers to give a wide berth to "Illinois Coffee," "Australian Coffee," "Japan Coffee," etc. We have had samples of several of these, and find them to be Okra, Virginia or chick peas, chickory, etc., seeds of which are abundant. ☞Will Mr. Huffman please make us *some* return for the $1.06 we sent him through a friend some time ago? We did expect he would send us at least a few seeds of his Australian coffee, such as it is, just to exhibit along side of the chick peas, (the same thing,) which we raised in our own garden last year.

Tobacco Seed.—Many inquirers in regard to tobacco seed will find an answer in the article on tobacco in the March *Agriculturist*. Where tobacco has not been raised extensively it is impossible to tell what kind is best. The "Conn. Seed leaf" matures in 2 months from transplanting, and has a broad fine leaf and mild good flavor; when raised on good soil it burns very white, has a good color, and sells for a good price.

Cotton in Kansas.—A subscriber in California Township, Coffey County, Kansas, writes that a lady residing in that County raised 120 lbs. of cotton last season, and worked the whole of it into cloth for the family, adding wool to a portion of it.

Okra.—This plant is not so generally known as it should be. The green seed capsules make an excellent nourishing soup, which we would not like to be without during the Summer. The plant is very easily grown; it may be sown in drills in the open ground, in April or May, and the plants thinned out to a foot or so apart. The earlier the seed can be started in the garden, or in a hot-bed, the sooner will the pods be ready for cooking. We have already published in the *Agriculturist* directions for making the soup. The green pods or capsules are boiled with meat juices, the same as for other vegetable soups. ("Mary," writing from Wayland, says that having lived many years at the South, they learned to cook okra the same as asparagus. The pods would need to be very young and tender. She also says its seeds, when ripe, make good coffee.)

Boiling Potatoes.—Whether it is best to put them into hot or cold water, was referred to us for decision, some time ago. After several trials, we cannot discover that it makes much difference; we give preference to putting them in cold water, to heat up with it.

Lice in Hen-houses.—P. Thomas, Jefferson Co., Ky. Thoroughly white wash the infested houses in every part. Lice and other insects have a great aversion to lime. Dust nests with dry lime or wood ashes, and have dry ashes for fowls to dust themselves in.

Top Dressing for Grass Lands.—"Robert," Northern New-York. It would have been better, perhaps, if you had applied the manure last Fall. But, if neglected then, don't let it slip this Spring. Perhaps the ground is yet frozen with you, in St. Lawrence, if so, it is easy to get into the meadows with an ox-sled. Or, if the frost is out, perhaps you can use a wide-wheeled cart, scattering the manure from the tail end, as the team moves slowly along. When the manure is used up, finish the rest with ashes, and see which gives the best results.

A Cheaply Grown Early Salad.—Take long boxes, about three inches deep, 4 to 6 inches or more wide, and of any length. Fill them with good friable garden soil; press it down, and sow upon the surface, English mustard, and curled cress, (pepper-grass;) and simply press the seed *upon* the soil with a board. Keep the boxes in any warm corner, in the house, in a light cellar, or in the green-house or hot-bed if you have either. The seed will spring up quickly, and as soon as the rough leaves begin to appear, the cutting may be commenced. It is good upon bread and butter, or may be used with vinegar, etc. By thus leaving the seeds upon the surface, and pressing the soil smooth, the leaves are kept clean. The soil needs to be kept moist by an occasional careful addition of water. A house-grown supply may be easily kept up all Winter and through early Spring. [F. Otto, for *American Agriculturist.*]

Peas with Potatoes.—Early peas sown in potato rows, will afford good picking for the table, and be out of the way before interfering much with the potato tops. (We speak from experience.) This is for good garden soil, rich enough to bear two crops.

Corn in Hills or Drills?—"Waterville, Me.," and many others. Where land is cheaper than labor, hills may be best, as more of the work can be done when the plow or cultivator is run both ways. But the largest yield can be obtained from drills. Five or six separate stalks, along 3 or 3½ feet of a drill, will give more ears than four stalks crowded into a hill. We prefer planting in 2 to 2½ feet drills, the kernels 3 to 4 inches apart, and after the stalks are safely and well started, to cut out the weaker ones, leaving them 6 to 10 inches apart, according to the variety of corn and size of stalks.

Skirving's Improved Turnips.—S. E. Fales, Sec. of Farmers' Club, North Wrentham, Mass., says he sowed some of this variety last season, and obtained specimens weighing 9 lbs., as smooth, handsome turnips as he ever saw. At a meeting of the Club they were pronounced the finest appearing turnips of the year. But up to Feb. 3, a variety called the Peruvian were best for the table.—Mr. F. received from the Patent Office a parcel of seed labeled "Lupius, from Egypt," which proved to be a common wild plant abundant in the woods along side of those growing from the seed received from Washington—a hint to the new Secretary, whoever he is to be. Another plant may be derived from the fact that seed of a wonderfully fine tobacco, with a jaw-breaking name, sent out to Connecticut from the Patent Office, proved on trial to be the common *Mullein*. The "Dutch Horn Carrot" from the same source proved good.

Leather Chips are slow in their action, but gradually decompose and afford a valuable manure. They contain enough of value to make them worth at a lowest estimate $4 a tun, and cart a mile or two, although so slowly available. Their decomposition may be quickened by composting with ashes and lime.

The Old Baskets can this month be turned to better account than for kindling wood. Fill a basket with good garden soil, and plant in it seeds of squashes or cucumbers. Keep it in a moderately warm place, with an occasional watering, and when the garden

is ready for planting, set the basket directly in the soil. The vines, already well started, will continue to flourish, and produce a crop several weeks ahead of the seed sown in the open ground at first. Potatoes, peas, etc., may be started in the same way. The roots readily find outlets through the sides of the basket into the surrounding soil.

To Keep Bugs from Melon Vines, etc.—A Good Plan.—G. Roys, Hartford Co., Conn., says the cheapest and most effectual remedy for the striped bug, is to cover the plants with cotton, thus: Take the common cotton batting, separate it into very thin layers, and spread over the plants as soon as they appear, putting a little dirt on each corner to prevent the wind from blowing it off. He has tried it for several years with entire success. The plants may attain considerable size before removing the cotton, which stretches as they grow. If thinly spread, the cotton does not interfere with light and moisture, while it entangles the insects.

Watermelons Change with the Soil.—I have planted seeds from *the same melon* on two kinds of soil, with the following results: Those on sandy soil, moderately rich, produced melons of large size and the finest flavor; while those planted on rich, loamy soil, turned out only poor, dry, spongy fruit, of small size.

No Seeds of that Big Pumpkin.—A large number are inquiring, by letter and otherwise, for a few seeds of that big pumpkin recently on exhibition here. As usual with such large specimens, it contained very few seeds—only 19 perfect ones all told—and these were spoken for months ago.

Rhubarb Good for Drying.—H. C. Smith, Vermillion Co., Ill., writes: "Among all the good things justly said in the *Agriculturist*, in favor of Rhubarb or Pie Plants, I have not seen it stated that when dried it is as good a substitute as dried apples for green rhubard—in fact, I like the dried rhubarb better than the green for pies. To dry, cut it in inch-long pieces, and spread it in the sun, the same as apples."

Rhubarb in Winter.—On February 15th we received from J. C. Thompson of Richmond Co., Staten Island, stalks of rhubarb 18 inches long, of a beautiful pink color, which cooked crisp and tender. They were grown in a dark but warm cellar, by merely placing the roots in boxes of earth in the Fall, setting them in the cellar, and watering occasionally. With a very little trouble some of the surplus roots of the garden, or crowns taken from large plants will furnish a considerable supply during Winter.

Get a supply of good Strawberries.—The premiums offered on p. 128 will enable many of our readers to secure, without expense, a supply of plants which will yield them large, luscious berries in abundance for another year. And what is more desirable in the garden, or rather on the table, than plenty of strawberries of the best kind, many times larger, more beautiful, and every way better than the wildlings, that cost more to pick them than they are worth. As already remarked, a few plants can be rapidly multiplied under favorable treatment. Half a dozen parcels of 25 plants each, can be multiplied this year, so as to supply a neighborhood next Spring. Suppose our subscribers at different points make up a club of four to seven subscribers extra, and secure seventy-five to one hundred plants, (or 105,) free of charge, and distribute them around. We doubt not they will feel repaid, and that next year we shall have in every place where this is accomplished, at least a goodly number of new subscribers—and plenty of old ones who *know* what good strawberries are.

The Poppy is Hardy.—We had taken for granted that the different varieties of the Poppy (*Papaver Somniferum,*) would be killed during Winter, if sown in Autumn; but we have direct evidence to the contrary. On going over the ground where the two kinds of poppy seed in our distribution list (Nos. 203-4) were grown, we find that where the seed dropped last Autumn, and came up, the plants are as fresh and green to-day (March 12) as a grass plot in the middle of May. This is in the open field, exposed to snow and frost, and the snow is just melting off from them.

Gladiolus and Japan Lilies.—Mary Favor, Winnebago Co., Ill. Bulbs of both the above should be planted in Spring. They are advertised in this papers. The cost varies with the beauty and the rarity, from 25c.@75c., and even up to $2 each for gladiolus bulbs, and 50c. to $1 for Japan lilies.

Mexican or Madeira Vine.—A Hartford correspondent of the *American Agriculturist*, writes that this is one of the best annual climbers for covering trellises, arbors, etc. It is grown from a tuber like the potato, to be planted as soon as the ground is warm. In a rich strong soil the vigor of its growth is very remarkable, hardy, climbing a cord to the hight of 40 feet. The leaves are broad, fleshy, light green, and very glossy; they are set close upon the vine, and about the time the vine approaches its full growth, branches are thrown out at each leaf which soon flower, and the whole plant becomes covered with pendent spikes of delicate and fragrant white flowers. It will not bear frost. In good soil the yield of tubers is very large. The botanic name is *Bowsingaultia basselloides.*

Picking Grapes at Christmas.—F. S. Vaslet, of Napa County, Cal., writes us that he has fresh picked grapes on his table last Christmas, and that he left some on the vines much later. He thinks they were better than if picked as soon as ripe in September. Cloths tied loosely over the clusters kept off birds.

Six Grapes for a Cold Grapery.—B. Ayres, Rock Spring, Pa., asks for the best six *native* grapes for a cold grapery, and also for six foreign grapes, for lat. 41°–800 feet above tide level. Answer.—So far as we know, *native* grapes have not attained their full perfection, under glass as a general thing. Perhaps the following would be as good a selection as any: Diana, Delaware, Herbemont, and Anna, (or Union Village, or Catawba). To Kalon, and Union Village, we have seen bearing freely under glass, but the fruit was of poor flavor. Native grapes usually have thicker skins and a harder pulp when ripened under glass, than in open ground, though they flourish well. For six foreign grapes a good selection would be: 2 of Black Hamburg, and 1 each of Grizzly Frontignan, Royal Muscadine, White Sweetwater and Zinfidel.

Budding Shoots kept in Vials.—H. A. French, Eaton Co., Mich., says that shoots for budding have been kept 3 weeks corked up in a vial with a few drops of water, and when inserted nearly all lived. Grafts could doubtless be preserved a long time in the same manner, by keeping them in a moderately cool place.

Transplanting Evergreens from the Forest.—D. Dunn, jr., Washington Co., Pa. This is a somewhat uncertain operation. The roots, especially of white pine, have few fibers unless grown in a light good soil. The *best* way is to begin with forest or pasture trees early this Spring, digging about them and cutting off the tap-root. Fill up fine soil for new root fibers, and then leave until May of next year, when they may be transplanted with fair success, if the roots be kept from sun and dry air by covering during their removal.

Urbaniste Pear.—T. M. B., writing from the pear-growing region near Boston, Mass., takes us to task for omitting the Urbaniste in the list of pears for an orchard, published on page 36 of *February Agriculturist.* Our only reason for omitting this really good pear is that it comes late into bearing—several years after some other varieties have been yielding regular crops.

Wash for Fruit Trees.—Solomon Robinson, Worcester Co., Mass., uses the following wash on his fruit trees with good effect. Put a pailful of water in a tub, and stir in 3 quarts fresh cow manure, 1 quart soft soap, 2 quarts sifted wood ashes, and add urine enough to make the mixture of the consistence of white wash. Apply this to the trunks and limbs of the trees early in June, with an old broom. The manure and ashes form a coating which each rain gradually removes, leaving a clean glossy bark, and also carrying fertility into the soil.

Grafting the Wild Apple, Plum, etc.—Ernest Eggert, Clayton Co., Iowa. The wild apple tree (native crab,) can be grafted in the branches, but it is better to bud it near the ground, while small, with some approved sort of large apples. The wild plum should always be budded, and it is safest to bud the cherry. It is difficult to make the common cherry take upon the stalk of the black or very small red sort. It will succeed on the mazzard or heart-shaped wild kinds.

Varieties of Apples for Suffolk Co., L. I.—H. L.: Consult the extensive list of proved sorts published on pages 110 and 143 (April and May,) of the last volume of the *Agriculturist*, and make selections accordingly. Those lists were full, and good for different parts of the country. (Those not having them can obtain, post-paid, copies at 10 cents each. The three numbers, April, May and June, give more full information in regard to the best kinds of apples for different parts of the country, than has been yet published anywhere else. Any one intending to plant an orchard can well invest 30 cents in those three papers.)

Germinating Locust Seed.—A. F. Gillett, Poweshiek Co., Iowa, says Locust Seed must be sprouted with hot water, before it will germinate freely. Pour on boiling water, let it stand until cold, pick out all which have burst their shells, and pour on more water, sorting out as before; mix with dry sand and sow.

Renewing and Preserving Peach Trees.—J. C. Thompson of Staten Island, recommends cutting peach trees off two feet from the ground, and covering the ends of the stumps, or large limbs, with cement. A healthy tree makes a great growth of young wood, easily controlled by summer pruning, and ready to bear the next year, not liable to break by winds, and easily supported if heavily loaded with fruit, which is also within easy reach. Mr. T. has also practised, for several years, applying about a handful of flower of sulphur about the base of peach trees. The base of the trunk being laid bare, and the worms removed, the sulphur is placed about it and the earth returned. This is done once in two years.

Crops in Young Orchards.—"A New Subscriber" asks what crop to plant on ground where a young orchard has just been set out.... Roots of some kind are best—carrots, rutabagas, or mangel wurzels. They may not be planted nearer the trees than about six feet, but the ground around the trees should be kept tilled just as if it was all planted, but not so deep as to disturb the roots of the trees.

Orchard Grass.—T. Conner, Chittenden Co., Vt. Most of our common grasses are weeds when growing *out of place.* Orchard grass (*Dactylis glomerata*) may be harder to exterminate than some other kinds of grass, but in our experience by no means so bad a weed as Quack or couch grass, (Triticum repens). Clean tillage of hoed crops, and clean seed for grain, will probably remedy your difficulty.

Blue Grass—Information Wanted.—J. T. Hayman, (P. M. at Kane P. O.,) of Campbell Co., Ky., asks that some one thoroughly acquainted with the Blue-grass region of Kentucky, would give definite details in regard to the culture of this grass—its value and use, the soil, mode of sowing, curing, etc. Such information would interest many others.

Sprouting Sorghum Seed before Planting.—A subscriber of the *Agriculturist* in Winnebago Co., Ill., writes that a neighbor who is an experienced cultivator of the Sorghum Sugar Cane, recommends to "soak the seed until it sprouts, before putting it in the ground; if this be done it comes up quickly and gets the start of weeds." (This, if properly done, may be a useful plan. The Sorghum seed, when over dry, starts rather slowly, and the young shoots, which resembles those of oats, make but a feeble growth for some time, and on this account are more difficult to hoe and weed out than corn. If previously soaked, as above recommended, the seed should be kept only moist, and not in water; if not spread out somewhat thin it would heat; and the sprouting should only be carried to the swelling of the seed and just breaking of the shell, for there would be danger of injuring the germ in sowing, if allowed to start out beyond the shell.—Ed.)

Long *versus* Short Parsneps.—On the score of production, it is reasonable to suppose that long parsneps and carrots are preferable to the short round varieties; the tops of those a foot or more long occupy no more space than those running down only three to six inches. We have another experiment in favor of long parsneps, especially when to be left in the ground over Winter, as they should be if desired in tender condition for the Spring table. On a plot of short round parsneps, which we raised last season, we find this Spring that the roots are all heaved out upon the surface and nearly destroyed by freezing—a thing that, with us, has never happened to the long rooted kinds in the same ground.

Raising and Keeping Celery.—S. Greenwood, Shelby Co., Iowa. This is very easy and pays for the trouble, in every garden. The field culture was fully described last month. The following is our method. Sow the seed thickly in a small rich bed of soil the last of April, or first of May. When the plants have leaves 3 or 4 inches long transplant to a trench made thus: A week or two before transplanting, dig one or more trenches a foot wide and 18 inches deep; put into the bottom 10 inches of a mixture of half good soil and half good manure, or the best you have, covering with 2 inches of good soil. Set a row of plants in this about 5 inches apart; water frequently, and keep shaded from

the mid-day sun with boards, for three or four days or until they start into growth. As they grow, hoe frequently, gradually bringing in a little soil around the stems, holding them together so that no earth shall fall among them. Continue to draw the soil around them until the approach of frost, when with a good growth you may have an embankment a foot high, and good stems 15 to 18 inches long. Some take them up before frost and put into boxes or barrels of earth in the cellar. We leave them in the garden, covered with earth enough to keep frost from the lower part of the plants, and with an ax or mattock cut off the frozen ground and take out the plants as wanted for the table. By the above plan we have never failed to secure a full supply of first-rate celery for Winter and Spring. The blanched white tender stems, washed clean, and eaten raw with a little salt, are a most excellent relish.

Earthing up Celery.—"Runnymede" of Cottage Farm, Dutchess Co., N. Y., says he knows no better way of blanching celery than to set the plants on level soil, and only earth up, one row at a time, as wanted for use in the Fall. It blanches sufficiently in 5 to 10 days, and without the rust common to that which has been bleaching for months.

Lima Beans, Early.—To secure an early crop of this delicious but late maturing bean, cut numerous bits of sod 2½ or 3 inches square, set them above a good bed of manure in a hot-bed, and plant a bean, eye down, in each, cover with soil to the depth of an inch. Transplant them in May, lifting the sods without breaking them, and put two or three to a pole in a warm sheltered spot. Pinch off the top of the vine when about 5 feet high to still further promote early maturity.

Amount of Lime on Wheat—Correction.—Mr. Reynolds writes that in the first paragraph of the "Spring Wheat Article," page 46, he intended to recommend *ten* bushels of lime, instead of two. The two words resemble each other in writing.

Weeds and Potato Rot.—O. W. True, Franklin Co., Me., referring to Delaware farmer's note on page 70 (*March Agriculturist*,) says that during the prevalence of the potato rot in Maine, he has many times noticed that in fields affected, the disease was always more destructive where grass and weeds were abundant, than in the clean ground of the same field; sometimes the former were left undug, while the clean plots yielded 150 to 250 bushels per acre. Early deep planting, with clean culture, always does best.

The Elder Sap-Spouts, noted on page 63, should have been credited to S. Hatton, Warren Co., O.

Catching Moles.—John H. Sharts, of Indianapolis, writes that moles confine their travels mainly to a short period after sunrise, then just after mid-day, and again just before sun-down, and that their location can then be easily ascertained by the movement of the ground. He closes the new made track just behind them with the heel of the boot to stop their retreat, and then catches the marauders. This may do if there be but few of them, and one has time to watch their motions. (We have recently received several mole traps from different subscribers, at least one of which appears to be very simple and effective. It is a cheap home-made apparatus, and will be sketched and described in the *Agriculturist* for May.)

Sourness in Soils.—C. J. C., of Summit Co., Ohio, asks "If alkalies neutralize acidity in soils, why is it that when timber has been burned, and the ashes left, moss and sorrel are the first things to grow?".... The use of the term sour and sweet, in regard to soils, conveys a somewhat false idea. True, vegetable acids abound in wet soils. It would require an immense quantity of alkali to neutralize the vegetable acids on a peaty soil, for they constitute a large part of its bulk. Sorrel does not grow on "sour" soils because they are sour, but because it finds congenial conditions of growth. A soil may be half vegetable acids, and yet not sour. We should say wet and dry instead of sour and sweet. Nothing *sweetens* a soil like letting the air into it by under-drains: no amount of alkali will "sweeten" a wet soil.

Lime on heavy, cold Land.—H., West Bridgewater, Mass., wishes to know what to do with a piece of cold wet swale land, with a mucky soil, and below a clay hard pan; it has recently been drained; heaves badly by frost; and bakes by the sun. He has no yard manure to spare. Put on at least 100 bushels of slaked oyster shell lime to the acre. Spread it evenly and work it in on the surface with a coulter-harrow or light plow. After a week or ten days harrow and sow grass seed. This is supposing the land to be well drained, which is the first or most important thing.

Sawdust and Fine Shavings in Manure.—A subscriber in Farrington, N. H., says he finds both sawdust and fine shavings very useful when mixed with manure to absorb the liquid, or rather used as bedding for cows and horses. Sawdust seems to operate better than even the fine shavings from a planing mill. There is no doubt that these and all other organic materials not only act usefully in retaining liquid manure, but they also, of themselves, as they decay in the soil, furnish some organic elements for nourishment of plants.

Cart vs. Wagon.—"C. R." asks "which is best?" For many purposes, the one-horse or the two-ox cart is best. The wheel being made broad, they can pass over soft ground with a load better than narrow wagon wheels. So, too, the cart is more convenient for dumping loads of sand, gravel, manure, etc.—the entire mass being easily tilted off at once. A cart is also more convenient for turning about. But then, the cart requires a heavier horse than the wagon, and is not so convenient for drawing of loads, stalks, hay, etc. A careless man will not balance the load properly to save straining a team. For stumpy or stony land, the cart may well come into more frequent use. The kind of each man's work will help him decide the question.

Farmer's High School of Pennsylvania.—We are informed by Dr. Pugh, President of this Institution, that the 4th Annual Session of ten months has just opened under very favorable auspices, notwithstanding the disturbed state of the country. Nearly ninety students have already entered, but there are a few more vacancies yet, which he desires to be filled. The course of study extends through four years, and is mainly devoted to science and the industrial arts, in connection with agricultural practice. The cost for board, room rent, washing, and tuition is only $100 per session. Persons wishing further information, should address Dr. E. Pugh, Farm School P. O., Penn.

The Association of Breeders of Thorough-bred Neat Stock, held its third annual meeting at Hartford, March 5. The President, Paoli Lathrop in the Chair. After reading and accepting reports of the Secretary and Treasurer, which latter showed $233 in money on hand, with some liabilities for advertising, etc., the Association elected officers for the ensuing year, as follows: *President*, S. W. Buffum, Winchester, N. H.; *Vice Presidents*, R. Linsley, Meriden; D. Buck, Poquonnock; Milo J. Smith, Northampton, Mass.; C. M. Pond, Hartford; H. H. Peters, Southbury, Mass.; *Secretary and Treasurer*, Henry A. Dyer, Brooklyn, Conn. The Committees on Pedigrees (three for each of the four principal thorough-bred races of cattle,) were re-elected, and the Publication Committee also re-appointed, and authorized to proceed with the publication of a herd-book for each breed, to include the pedigrees passed upon by the Pedigree Committees. The Pedigree Committees reported having passed upon and affirmed 206 Short-horn, 197 Devon, and 212 Ayrshire pedigrees—each committee having still a number under consideration, and having rejected a considerable number. The Com. on Jerseys made no report of pedigrees. The membership fee was reduced to $1. Pedigrees are investigated, and if found perfect, are published in the Society's herd-books, at a charge of 50 cents each. The Association has members among the prominent stock-breeders of the Eastern and Middle States and Canada, and some at the West; is flourishing, and seems likely to do much good. The Secretary will furnish other information.

Royal Hort. Society of England—A Hint to New-Yorkers.—The Annual Report of the above Society shows it to be in a highly prosperous condition. The number of Fellows, or Members, on Jan. 1st, was 2,174. These contribute from $3 to $20 each, the lowest annual dues being one guinea, ($5). A considerable number commute for a period of years, or for life, paying 20 to 50 guineas. For 8 months prior to Jan. 1, the receipts from members alone amounted to nearly $44,000. The old Garden at Chiswick were found to be badly located for the convenience of the present public, and the new Garden at Kensington has proved a valuable enterprise. On the death of the late President, the Prince Consort, the widowed Queen was consulted as to a successor. She stated that were it compatible with her position she would gladly occupy the chair. She nominated the Duke of Buccleuch who was at once unanimously elected President. Prof. Lindley, the eminent botanist, continues Secretary. Our horticulturists in and around New-York, will find it worth their while to study up the history of the London Society. It is high time that something more effective were done towards establishing in the Metropolitan City of this Continent a great central Horticultural Society, with its gardens, etc. We have all the facilities for such an enterprise, could they be properly brought into requisition. A *leader* is wanted.

Removal.—The Agricultural Warehouse of Messrs. Haines & Pell, (late Tredwell & Pell,) destroyed by the recent Fulton-st. fire has been reopened at 27 Courtlandt-st. We are glad to learn they were insured.

Rec Books—Jenny Corn—Keystone Club.—C. Hoffman, Dauphin Co., Pa. Langstroth's Work on Bees is a good scientific book, costing $1 25, post-paid. Quinby's is also a practical work, costing $1, post-paid. We would not like to be without both of them. The "Jenny Corn" we did not advertise because we did not know enough of it to warrant us in placing it before our readers, though offered pay for doing so. The Keystone Club we know nothing against; it is no individual agency for collecting subscriptions for the commission allowed by publishers, we believe.

A Very Good Little Book is one entitled "Mistakes of Educated Men," and of *others*, might well have been added. This was first written as an address to young men just going forth from College to active life, and points out clearly and convincingly, a few errors to be avoided, and plans of labor to be adopted, in order to success. The hints given are important, and we advise every father to read the book himself, (it will only require an hour), and then put a neat copy into the hands of each one of his sons, no matter what is to be their calling. The author, John S. Hart, was for 20 years Principal of the excellent Philadelphia High School, and the hints given in this book are the result of his experience and observation after training, and following the subsequent career, of more than 4000 young men. (Price, post-paid, in neat binding, 50 cents.) J. C. Garrigues, Philadelphia. We add it to our book list on page 126.)

Childrens' Feet.—"X," of Middlesex Co., Conn., advises parents to see to it that childrens' feet are kept warm at night, and recommends that this be looked to an hour after retiring, and if the feet be cold, a bottle of hot water or a warmed brick be applied. If this be attended to, many of the "mysterious dispensations of Providence," in the removal of children, will be averted. If children are restricted to light suppers, say only *a moderate* supply of bread and milk, or milk and rice, or hasty pudding, they will be less troubled with cold feet and restless brain. A load of food in the stomach withdraws blood from the rest of the body, and leaves the lower extremities cold, while it also disturbs the brain.

Merchant Farmers.—D. S. W., of Philadelphia, inquires: "Do you suppose a man of industry brought up to business in the City, and of course without any practical knowledge of farming, but having sufficient means to purchase and stock a farm of say 50 acres, could make both ends meet by depending on hired help until he acquired the necessary knowledge?".... Yes, with good help, and making no "improvements" for a year or two. A good business man will make more money on a farm than a born and bred farmer *without* business habits.

For Stopping Leaks in Roofs.—A correspondent recommends the following: "Take four pounds rosin, one pint linseed oil, and one ounce red lead, simmer together slowly while hot. We have no doubt it is an excellent recipe, and the cement may be applied to other purposes of similar character.

"Rev. E. A. Wilson" a Humbug.—We supposed we had exposed the person advertising over this name sufficiently to put all readers of the *Agriculturist*, at least, on their guard. But our newer readers may need a new caution, at least we so judge from sever al recent letters of inquiry. It may therefore be said in brief, that we have never yet been able to find "Rev. E. A. Wilson." He formerly claimed to have been a preacher in the "New-Haven Conference." This falsehood we nailed by reminding our readers that Methodists themselves never heard of any "New-Haven Conference." He now substitutes the "New-England Conference." His own advertisements in the N. Y. Tribune, and Times, he quotes in his pamphlet as if they were editorial endorsements from those papers. (They deserve this for even inserting his advertisements.) This *so-called* Rev. E. A. Wilson, (like all the rest of the class) pretends to great benevolence, and a desire to benefit the afflicted without charge. He sends a "prescription" it is true, but while by specious statements he almost or quite convinces the nervous suffering that his medicine will be their salvation, he is very careful to inform them that the medicine is very costly and difficult to get in a pure state, and that the safest way is to send him (the "Rev. E. A. Wilson,") *two* dollars, and fifteen cents more for postage, and get the genuine medicine. This is the practice of all of these "retired Physicians," retired clergymen, and other benevolent humbugs. That they deceive many, is evident, as they continue to expend very large sums in advertising.

Farm-House Plans.

The accompanying plan (Fig. 1.) of the ground floor of a farm house is sent to the *American Agriculturist* by a subscriber in Williams Co., Ohio, who writes, "I propose to adopt the within plan if I can get no better, and ask for any improvement on this, or other plan which will suit the location." We present a plan (Fig. 2) which we think to be an improvement upon it.

Fig. 1.—PLAN OF MAIN OR GROUND FLOOR.

(Explanations applicable to both plans—*a*, Front entry; *b*, Sitting or dining room; *c*, Family bedroom; *D*, outside doors, *d*, inside doors; *e*, Parlor; *f*, Parlor bedroom; *g*, Kitchen; *h*, Pantry; *i*, Closets; *K*, Veranda; *l*, Linen closet; *o*, Oven; *R*, Roof; *S*, Shed; *w*, Windows.)

In the plan (fig. 1) sent for criticism, 1st, there is in proportion a great deal of outside wall; 2nd, the kitchen is far from the dining room; 3d, the pantry is made a passage way; 4th, the 5 outside doors all open into principal rooms; 5th, there are no closets; and 6th, the rooms are generally too small. In fig. 2 we remedy the first objec-

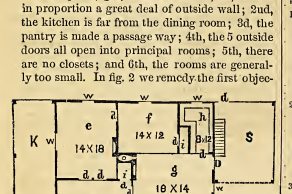


Fig. 2—PLAN OF MAIN OR GROUND FLOOR.

tion by making the house square; the 2nd and 3d by a different arrangement; the 4th by a front entry, and only 2 outside doors; the 5th, by putting a good closet in every room but the parlor; and the 6th by economy in the arrangement of rooms, only adding 12 feet horizontal measure to

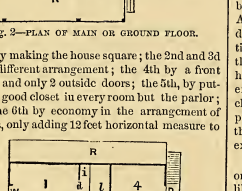


Fig. 3—PLAN OF SECOND FLOOR.

(1 and 2, are 2nd Story bed-rooms; 3, Maid's room; 4, Men's room, with entrance, *D*, by outside stairs.)

the outer walls. The bedroom does not open into the dining-room or into the kitchen, as one never should do. From the front door you pass directly either into the sitting room, kitchen, or bedroom, down cellar or upstairs. The pantry is in the coolest corner of the house. Folding doors almost make one large room of the parlor and sitting room, and a double window makes the kitchen very light. A large Veranda, 10 feet wide goes round two sides of the house; it is a great and cheap luxury, especially in hot weather. The windows on the west, which if they could be so arranged should be the south side, ought to reach the floor. We give also a plan of the 2d floor for a story-and-a-half house—sufficiently explained by the references. We have not "figured upon it," but judge that the plan we propose throwing out the Veranda, would be the cheaper of the two.

The Patent Office Agricultural Department—Where the Money Goes.

We have more than once taken occasion to show up the sham affair at Washington, kept up under the specious name of an Agricultural Department. Here is a specimen of the way the money is expended—the following figures include a period of less than seven months, viz.: from July 1, 1861, to Jan. 23, 1862, not including the large sum paid for printing the "Reports." We take the Tribune's figures, professedly copied from the books at the Patent-office:

1. *Seeds*: To Vilmorin, Andrieux & Cie., Paris, for seeds ordered by Mr. Clemens, $14,998 94; to Paschall Morris, Philadelphia, for seeds, $10,746; also to F. Morris, $83 for 50 bushels of Mediterranean wheat, and $40 for 100 bushels of barley; to Peter Gorman, $85 for 50 bushels of Tappahannock wheat; to C. Edwards Lester, $50 for 50 ounces tomato seed; to Chas. A. Leas, $75 27 for box of Wuigan (?); for seed bags, $1,467 53; for filling bags with seeds, $250 31; for freight, $373 79. Total.....$28,105 84
2. *Salaries*,—Under general head of "Salaries," $11,471 49, to which add: Paid D. J. Browne, for services in Europe, $1,500 (*what* service?); David A. Wells, for 50 pages of Report, $300; Samuel J. Parker, for article on grapes, $70; Louis Baker, for article on palm sugar, $15; Louis Schade, for article on lupine, $11 50; for copying Report, $432 98; for drawing, $15; for cutting grass and keeping the yard around the Patent-office, $284 70. Total.....$13,960 95
3. *Sundries*.—Books and papers, $22; paste, oil chairs, etc., $130 41; use of horse, $328 88; covering Reports, $73 25; stationary, $1,408 98(?); rent, $50. Total.$1,922 52
4. Propagating garden $2,348 77
Total, 18 months and 3 weeks $46,534 08

We have not arrayed the above figures to show the total as anything frightful. Ten or twenty times forty-six thousand dollars would be cheerfully accorded to the Department of Agriculture, if *well* expended in collecting and disseminating useful statistics and other information respecting the great industrial prospects of the country. But can any one tell us what we have, or shall have, to show for the $46,534 08 expended as above—save, perhaps, the $2,548 charged to the Propagating Garden? The propagating and experimental gardens were the only redeeming feature we found after much examination of the concern at Washington.

Take the *seed* expenses, for example. Can any one report anything good that has come, or is likely to come, of the twenty-eight thousand dollars expended, or of the similar sum expended annually, for years past? We hesitate not to assert, that there were, during the last Summer alone, more plants of beautiful flowers, and more fields of Chinese sugar cane, of improved corn, oats, etc., growing from seeds sent free from the office of the *American Agriculturist*, than from all the seeds distributed from the Government Seed Store at Washington in five years past. (Government derived over $2,700 *postage* from seeds we sent out last year.) And at an expense of less than $3,000, we shall this year distribute *more* parcels of seeds, scatter them among ten times as many persons, and secure wider and better results in the future, than will come of the $28,000 expended at the Patent-office for seeds. We say further, that the three chapters of Reports on Apples, gathered by the *Agriculturist* last Summer, offered more *useful* statistical information than will be found in any Annual Report of the Agricultural Department during several years past. Again, the Crop Reports to be published in the *Agriculturist* the coming Summer, will be worth more to the farming interest of the country than any year's operations yet performed at the Government establishment. By the way, as the *design* of the Patent-office seed distribution is to gather and distribute rare and valuable seeds from *foreign* countries, we should like to know what *kind* of seeds were furnished by the Philadelphia Seedsman, to the amount of eleven thousand dollars.

So much for the past and present. As a new system—a "Bureau of Agriculture,"—is now to be established, we trust some man will be appointed at the head of it who shall be able to strike out upon a new track. Let him expend less money in distributing *common* seeds, and more in getting Statistics upon the amount and condition of the growing crops, the different modes of cultivation, the kinds of grain, fruits, etc., best adapted to the several sections of the country. Let new varieties of seeds, cuttings, etc., gathered in other countries, be first *tried* on experimental plots at a few points, before large purchases are made and the seeds scattered at random over the country, often to prove utterly worthless, if not an actual pest, as they have sometimes proved. In these, and other ways, the new Agricultural Bureau may prove of use.

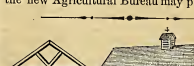


Fig. 1. Fig. 2.

Hints on Tobacco Culture....No. II.

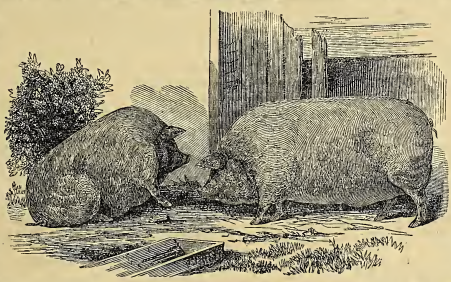
Light, mellow, and deep sandy loams are best, if sufficiently enriched. Lime soils are considered bad, and heavy loams do not produce quite so fine a quality of tobacco, though perhaps larger crops. Spread on enough barn-yard manure, or compost of the best quality to make a crop of 80 to 100 bushels of shelled corn to the acre, and put it fully 7 inches under ground. On sward land, turn the sod flat, 10 inches deep, with a Michigan plow, then manure and plow it in deep, not disturbing the sod. The land must be plowed again in June.

The preseut may be as convenient a time as any to put up tobacco sheds, and we give figures and a description of the kind common in the Connecticut Valley. Figure 1 is a section showing the frame and poles on which the tobacco plants are suspended. Figure 2 shows the arrangements for ventilation. The building is framed 24 feet wide, the posts 16 feet high. On the sides, and through the middle, between the posts, are three tiers of scantlings, to which the boarding is nailed, which are placed so as to support the 12-foot of rails or poles on which the tobacco is hung—25 to 30 plants on a rail. In fastening on the outside boarding, about every third board is hung on hinges, making openings from top to bottom. Ventilators are placed in the shingled roof, at least one in every 48 feet. These "sheds" are set up some 18 inches from the ground, on brick or stone, and it is best to have shutters swung so as to close the opening all around. They have no floors, and are of indefinite length.

Where Did It Come From?

The following interesting experiment we have stated in an occasional agricultural address, and have perhaps already given it in the *American Agriculturist*, but it is worth repeating. Two hundred pounds of earth were dried in an oven and weighed, and afterwards put into a large earthenware vessel, and a willow tree weighing 5 lbs. planted therein. During five years the tree was watered with pure rain or distilled water; and to prevent any addition of earth or dust, the vessel was covered with a metal plate, perforated with holes so small as to admit air only. At the end of five years the tree was found to weigh 169¼ lbs. The annual crops of fallen leaves were not taken into account. The earth was then baked and weighed as at first, and had lost only 2 ounces. *Whence was derived the 164 lbs. of woody fiber, bark, roots, etc.?* They must have come to the plant from the atmosphere, and the rain water, through the medium of the leaves, roots, and bark. We see all around us similar examples. Yonder old field of ten acres has annually produced at least one ton per acre of grass, straw, grain, corn, etc., for a hundred years, or a thousand tons, (two million pounds!) of materials which have been carried off and consumed elsewhere, while perhaps the only addition to the field has been less than a quarter ton of seed. Yet the field has not sunk lower by reason of any loss of substance. Indeed it will weigh more to-day than before all this cropping, by nearly so much as the weight of the grass roots and black mold now in the soil. It has lost a little of soluble mineral matter that has been carried into the plants by the sap, and left there, either absorbed into the substance of the plants as constituents, or left there by the evaporation of the sap.

The truth is, soils do not "wear out." They are the machine in which plants are manufactured from air furnished materials. When the plants decay, or are burned, they return the matter to the air, which is the great storehouse of plant food. The skillful cultivator gathers a larger share of this plant material than others. The more skillful one not only gathers an annual supply in the form of crops, but he also secures an extra quantity which is stored in the soil as an additional stimulus or nourisher of the next crop. This he does by sowing clover, or seed of other plants which absorb large amounts of plant food in the form of leaves, stems, and roots; these he turns under, and holds them in store for another crop. His soil is thus increased in quantity, especially in organic elements which adapt it to the production of larger crops. In the absence of home-made yard manure, there is no better way to renovate old land, or to lighten heavy land, than to plow in green clover, or buckwheat, rye, millet, oats, etc. The green crops thus mixed with the soil answer several purposes. As they decay, they furnish richer stores of new food, which nourish and strengthen the growing plants, and prepare them to absorb more food from the air; by their decay they leave the soil open and porous, admitting more air and warmth into it, and drawing off water; and the mold formed by decaying vegetables, darkens the soil, making it absorb more of the sun's rays, and thus become warmer. Clover, by reason of its abundant leaves, and the large amount of nitrogen in its composition, is the best green crop to turn under. But where the soil is too poor to grow clover, other coarser crops, as buckwheat, may be first used to bring up the soil to the clover bearing point. Two or three crops of buckwheat may be grown and turned under in a season. Plaster of Paris is generally useful to start clover.—The first days of this month (April) should be improved in sowing clover seed upon the growing wheat and rye. Choose a still, cool morning, when the ground is opened with myriads of frost cracks; the seeds will drop into these, be well covered by the thawing soil, be warmed into active life by the spring sun, be shaded by the growing grain until rooted, and after harvest will afford considerable pasturage, and the next season good pasturage, mowing, or green manure.



Chester County Hogs.

Some notices of the qualities and doings of these hogs have appeared from time to time in past numbers of the *Agriculturist*, and many inquiries concerning them have been received. The accompanying sketch engraved from a photograph of two of them owned by Paschall Morris, exhibit the prominent points of the breed—if a distinct breed it may be called. To establish a breed a long succession of careful selections from the same family is required. That considerable care has been exercised with the Chester County hogs is evident; the only point of doubt is, whether this has been continued long enough to stamp indelibly the characteristics of the tribe upon all pure-bred animals. The frequent breeding of hogs, makes less time requisite, than for horses and neat cattle, which breed but once a year and require a longer time to arrive at maturity. From all accounts, it would seem that reasonable care has been taken for some twenty years past, and the present race, though scattered pretty well over the country, hold their own; and if not now entitled to the claim of a distinctive American Breed, they soon will be. We trust breeders will exercise great care to bring this about. They are supposed to have originated some thirty years ago, from a cross of an imported Bedfordshire boar with the best common stock of Chester County, Pa. All the notices of them that we have received or seen have been in their favor. If any one not prejudiced by other interests, has anything to say against them let us hear it.—The claims of the Chester County hogs for public favor are: good constitution, large size, length and depth of carcass, smallness of bone and offal, quiet habit, and well larded inside. The color is pure white, well coated with silky hair. Any black hairs, or the least variation from white is regarded as a mark of impurity.

Value of "Blood" in Animals.

It has often been shown in the columns of the *American Agriculturist* that, in the improvement of all kinds of domestic animals, very much depends upon securing the use of *well bred males*. This is pre-eminently true in the breeding of neat cattle, and with this class of stock we have the ability, over the whole country, to obtain the use of thorough-bred animals. A strange prejudice exists against acknowledging the fact, every day demonstrated, that grade, cross-blood, or "native" bulls, beget calves as likely to be bad as good, and upon which we can make no sort of calculation unless it be in the case of some old bulls. We sometimes, but rarely, find that a grade bull gets excellent stock with great uniformity. In this ability to propagate good qualities (not necessarily his own) he only shows the excellence of some strain of blood from which he is sprung. We do not know the fact, however, until his progeny are grown. The thorough-bred bull, on the contrary, marks *all* his calves after his breed and usually also after himself. Male animals give to their immediate offspring, with considerable uniformity, muscle, bone, spirit, and external characteristics; and in the thorough-bred races they impress other characteristics usually derived from the dam, particularly milking qualities. We all doubtless have knowledge of families of milkers of the old native stock in which, for generation after generation, the cows looked alike and milked alike; so much so that "Old Brindle's" heifer calf was sure to be raised, and we were almost morally certain that in the course of time all the old favorite's good qualities would be developed in her; the influence of the scrub bull, her sire, not being taken into account at all. Now-a-days, we see the progeny of Jersey and Ayrshire bulls with good, bad, and indifferent cows almost uniformly taking after the breed of their sires, in milking qualities as well as in characteristics logically expected from the sire.

We argue then, and urge the consideration upon our readers, that the most direct, feasible, economical, not to say the *only* available way for most of the farmers of this country to improve their stock is by the use of thorough-bred males. Evidently, an animal is not thorough-bred when he is only three-fourths or seven-eighths pure blood, yet he may be handsomer and every way a better animal than any thorough-bred in the neighborhood. Still, you can not be sure that his calves will be good; while even a very inferior looking thorough-bred bull is almost absolutely certain to get first class calves from grade cows.

Our breeders of thorough-bred cattle, of all the improved breeds, commit a great error in holding their bull calves at so high a price as to prevent sales, and finally, as is often done, making stags of them rather than sell them at a low price. If they would even give away the bull calves, which they do not wish to keep and which are not worth a *very high price*, on condi-

tion that they shall not be used upon thorough bred cows, and charge proportionately higher prices for the choicer calves of the herd, breeders would find it greatly to their advantage. In some such way the public must be brought to appreciate the value of blood.

Tim Bunker on Family Horses.

"In faith, she's dead as a herring, sir," said Patrick, as he came from milking, yesterday.

"Poor old crature, is she gone indade?" asked Bridget, the maid, as she lifted the corner of her apron, and wiped genuine tears from her eyes.

This was sad news, though I had been expecting it for several mornings, and not a very good preparation for breakfast which was already upon the table. I saw it was all over with the old mare, the mother of John's Blackhawk colts, and the faithful family beast of twenty-five years standing. She had been ailing for a fortnight, a little stiff in the joints at first, but nothing alarming considering her years. She had been serviceable up to that time, and though neither so strong nor so swift as in her younger years, was just as good for my purposes as a dozen years ago. When she began to refuse food, I resorted to the usual remedies, but soon saw that it was of no use. She died in her stall, on the fourth day after refusing food, full of years, and full of honors. I own that I set more store by her than any thing else that goes upon four legs. I had raised her, and ridden behind her to mill and to meeting, for over twenty years. Her disposition was a great deal more human than that of the common run of mankind. She knew her place and her business better. She was so completely under the control of my voice, that I never had occasion to strike her a blow. John lived upon her back almost, when he was a boy, and the women could drive her any where. She was the first horse John and Sally ever learned to drive, and she was associated in my mind with their childhood. It will go hard with John when he hears the news, down on the Potomac, for old Rose was the companion of all his boyish pleasures, until he was big enough to break colts. There is not a fish pond, or trout stream, within a dozen miles of home whither she has not carried him. He can hardly think of a pleasant spot, or a happy day in his childhood, a 'berrying with his school mates, or a 'visiting with his cousins, without recalling the nimble feet of old Rose.

It so happened that Sally and her husband were at home on a little visit yesterday, and it seemed to lighten the load a little, that we had children and children's children in the house, when there was so dark a shadow upon the barn. But it was rather a sad breakfast, even with these alleviations.

"She was just Sally's age, and—" remarked Mrs. Bunker, as she passed my cup of coffee, without being able to finish the sentence.

"What's the matter, grandma," asked little Timothy, who did not exactly understand the trembling lip, and the tears, that the spectacles did not hide.

"One of the earliest things I can remember," said Sally, "was a ride to mill, after old Rose, with you, father, and John. I couldn't have been more than four years old. I know John got to sleep before we got home, and you left him under the shed to take his nap out. You must not laugh at us, Josiah," directing her remarks, by way of apology, to her husband, "for our tears for old Rose. She was the mother of our Charley, you know

"A very remarkable beast, I have no doubt, from the impression she seems to have made upon those who knew her best," said Mr. Slocum, trying to enter into his wife's sympathies. "I have always thought horses approached nearer to man than any other domestic animal. The name of the horse recalls little Rose, in the Shady Side, who seems to have been so much afflicted at the sale of her father's horse, Pompey, as you are at the death of the family mare."

"Oh yes," said Sally, "I remember the passage, and it is one of the best in the book, where Mr. Vernon, the clergyman, had to sell his favorite horse out of sheer poverty.—'The children got bravely through the dinner; but afterwards, seeing her father look sadly out toward the empty stable, little Rose climbed his knee, and whispered, 'Never mind, dear papa, we shall see Pompey again—in heaven,' she was about to say,—but suddenly recollecting, she added, 'Oh no! he has no soul, has he? poor dear Pompey!' and the tears rained fast through her chubby fingers, with which she tried to hide them from papa.'"

"I do not altogether sympathize with the theology that takes it for granted that there is no hereafter for brutes," said Mr. Slocum.

"I should like to think so," said Sally, "now that old Rose is dead, but I can not see what place there is for animals in a spiritual world."

"I believe the Bible has not much to say on that point," said Mrs. Bunker hopefully.

"Very true," said Mr. Slocum; "and it is worthy of notice, that the most pointed thing it does say against their immortality, Solomon puts into the mouth of an infidel arguing that 'man hath no pre-eminence above a beast, for all is vanity.' They fill their places so much better than multitudes of men, and seem to answer the Divine purpose in their creation so much better, that it seems very sad to think there is no hereafter for them."

"It is almost as sad to think that some men can never die," Sally replied very soberly. "Still I think we shall have to give up old Rose and all our other dumb pets, when we become like the angels. You remember, Josiah, that passage in one of the 'Essays of a Country Parson,' where the writer represents himself to be seated upon a manger, writing upon the flat place between his horse's eyes, while the docile animal's nose is between his knees. The book is here upon mother's table, I will read it:

'For you, my poor fellow creature, I think with sorrow as I write here upon your head, there remains no such immortality, as remains for me. What a difference between us! You to your sixteen or eighteen years here, and then oblivion! I to my three score and ten, and then eternity! Yes, the difference is immense; and it touches me to think of your life and mine, of your doom and mine. I know a house where at morning and evening prayer, when the household assembles, among the servants there always walks in a shaggy little dog, who listens with the deepest attention, and the most solemn gravity, to all that is said, and then when prayers are over, goes out again with his friends. I can not witness that silent procedure, without being much moved by the sight. Ah! my fellow creature, this is something in which you have no part! Made by the same hand, breathing the same air, and sustained like us by food and drink, you are witnessing an act of ours which relates to interests that do not concern you, and of which you have no idea. And so here we are, you standing at the manger, old boy, and I sitting upon it; the mortal and the immortal close together; your nose on my knee, my paper on your head; yet with something between us, broader than the broad Atlantic.'"

"That is charmingly expressed, my dear," said Josiah, "and it satisfies the reason very well, but still the heart pleads for its accustomed companionship in a better life. It is a point not definitely settled by revelation, and as the belief tends to make men humane in their treatment of animals, I am inclined to think that there may be another life for them."

Sally and Josiah had a good deal of discussion in this vein, all very well in its place, but I could not take any part in it. Sally, I guess, had the best of the argument, but that did not make me feel the loss of old Rose any the less. The tears from under the old spectacles at the other end of the table, were a little too much for me, and I had to keep silence or join the company of mourners outside. Twenty five years, you know, make a great hole in the life of man, and when we are touchingly reminded that they have gone, even though it be by the death of a brute, it is very natural to think of the end. These domestic animals, especially the most intelligent of them all, the horse, have much to do with our moral training. The affection for them, which seems almost as natural and as strong as for our own species, tends to repress cruelty, and the abuse of the power we have over them. The civil law properly recognizes cruelty to brutes as a moral offence. Their kindly treatment is a virtue that makes better citizens, and honors the State.—As old Rose was so near to the family, we honored her with a decent burial. She lies under an old oak in the pasture where she used to graze. Peace to her ashes.

Hookertown, March, 15th, 1862. Yours to command, TIMOTHY BUNKER, Esq.

Abortion, or "Slinking" in Cows Produced by Smut on Corn.

The Belgian Annals of Veterinary Medicine, publishes a statement that the *Ustilago Madis*, or parasitic mushroom which occurs on maize or Indian corn as ergot does on rye, produces abortion in cows fed with it. The article says that in a stable where cows were given maize infested with this parasite, eleven abortions occurred within eight days, when, the cause being suspected and the food changed, no further case happened. The author of the discovery then, to assure himself of the supposed fact, dried and pulverised some of the fungi, and administered six drachms of the powder to two bitch dogs heavy with pup, and abortion was produced in each. This statement should be studied and carefully investigated by stock keepers in the United States, and more attention be bestowed by them upon the feed of breeding animals, as it is very possible that many otherwise unaccountable cases of slunk calves can be attributed to diseased corn. Whether the ripeness of the fungus, or its occurrence on green or dry fodder makes any difference, are points to be settled.

How Much Help Shall we Hire?

It is time to be making arrangements for the next season. The supply of labor, at least in the older States will be, we think, nearly as abundant as usual, notwithstanding the war. If six hundred thousand soldiers have been raised among twenty millions of people, it is only one in thirty three of the population. But at least three-fourths of this number have come from the cities and villages and from other callings than agriculture. A multitude have entered the army who were never very productive laborers, in any calling. They are now earning more for themselves and their families, than they ever were before. In the derangement of business

incident to the war, a much larger number following other pursuits have been thrown out of employment than all who have volunteered from the farming districts. It would not be strange, then, if labor should be even cheaper this season than the last.

We can see no reason either in the supply of labor or in its prospective rewards, why we should not employ as much as usual. If it should be cheaper than usual, it will be a favorable opportunity to enter upon some of those projected improvements which have been waiting the "good time coming," for many years. Almost every farm has swamps and wet land to be drained, pastures to be cleared of rocks, brush, and stumps. The production of such lands may be quadrupled in most cases by a wise use of labor. As a rule, we economize in the wrong place when we refuse to hire help in order to save the wages. Whether we have war or an early peace the Nation must be fed, and all the products of the farm will bring a remunerative price.

Blinks from a Lantern....XXX.

DIGESTS A CHAPTER OF EXPERIENCE.

Just in the valley, in plain sight from Higgin's Rest, lies the snug farm house of William Ruggles. You can see the smoke from his chimney on any of these still winter mornings, floating lazily away over the river, until it is lost in the distance. It is a gambrel roofed house, painted white, and has been the homestead of the family for a hundred and fifty years or more, since the first settlement of the region. At least three proprietors of the same name have died upon the spot, and the fourth, having passed the allotted term of human life, is likely to end his days in peace not many years hence. The family and the premises are a picture of serene old age, such as can be found no where else but in farm life—and that in this land of freedom, thrift, and intelligence. The old folks, both past seventy, have reached the Indian summer of life, and a Sabbath stillness reigns about the premises the year round. The children have long since grown up, and left home. Mrs. Ruggles never believed in servants, never found the need of one, and so persistently boils her own kettle, and cooks her weekly dish of beans and pork, just as she did forty years ago, without knowing that any thing has happened. Any evening that you may drop in upon her after six o'clock, you will find the table all cleared, the dishes washed, and Madam Ruggles seated in her snowy cap and spectacles, knitting soldiers' socks or mittens. She has a large chest full of stockings and drawers, plenty enough to last herself and Mr. Ruggles through life, should they live twenty years longer, which is not at all improbable. Mr. Ruggles is seated over in the corner, in his big arm chair, with pipe and newspaper, and the cat stretched on the rug before the stove, completes the trio of the family. The old gentleman does not believe in dogs—never owned one—but has owned a great many sheep, and sold a great deal of wool.

Out of doors, everything is about as snug and comfortable, as within. The barn stands back from the house, and has a barn cellar looking out cheerily upon the South, where the cows sun themselves in the brief winter days. The sty is hard by, where three pigs are annually fed, and come to the butcher's knife at Christmas, or a little after. Four cows, and a horse, a flock of sheep, and a multitude of hens and turkeys, complete the stock of the establishment.

There are only sixty acres of the farm, and it is managed with reference mainly to the comfortable support of the old folks, and the cat, rather than for profit. They have enough, as they think, to carry them safely through, and what is the use of working hard to leave money for a third generation. Their own sons and daughters are all thriving, have homes of their own, and are able to take care of themselves. It looks to William Ruggles like a "waste of the raw material" as he bluntly expresses it, to be saving money for folks who know how to earn it for themselves. He does not owe a dollar in the world—has his homestead all clear—has a thousand dollars or more in the bank against a rainy day, and the farm, with his labor, and that of a hired man in Summer, produces almost everything the family needs. Mrs. Ruggles manages the poultry and milk with so much skill, that all the store-bills are paid without any other draft upon the resources of the farm. He has a good orchard, and a large garden, which yield abundantly. The table is always bountifully supplied, and nowhere do friends meet a warmer welcome than in this rural home. Though his farming is nothing remarkable, he is one of the best specimens of manhood that I have met with since I lighted my lantern. He reads the papers, especially the agricultural journals, and evidently well digests whatever he reads.

I found him posted on most of the agricultural topics discussed in the papers the past year. He had read the discussion on the profitableness of farming, and said he did not wonder that there was so much talk about it. He said it used to be so fifty years ago, when he was a boy.

"Most of the young men then had an itching to get away from the farm as they have now. It was generally thought that it was a slow hard way of getting a living, and the boys all wanted to get rich in a year or two, and then lay off and enjoy life. My two older brothers were possessed with this notion, and, to the great grief of my father, went to the city as soon as they were able to manage for themselves. They both lie over on the hill yonder," said he, pointing to the old burying ground; "and their history and mine may be worth relating to the farmer boys who are now growing up, and are soon to determine their calling for life. Jonathan, my oldest brother, left home at the age of eighteen, and served as a clerk in the city for a few years, acquired some property, got well skilled in business, earned a good name, and soon after established himself as a cotton broker in Charleston. He made money rapidly, married happily, and after a few years was able to come on north every Summer, with his family, and spend money about as freely as he made it. He was a man of good morals, and correct business habits, and there was no reason in himself why he should not have kept his fortune, and died a rich man. But he did not. In the business of buying and selling on a large scale, as is generally the case with cotton, there will be fluctuations in the market that no man can foresee. At the age of fifty he had lost all his property, and had to begin life anew in the North. By a second marriage he repaired his shattered fortunes, and for a few years lived comfortably as a clerk in the city. But he accumulated nothing, and by the breaking of a bank, his wife lost everything, and for years before his death, he was supported in part by the charity of friends.

"Robert, the brother next older than myself, left the farm at twenty-one, and set out in business as a clerk in the city. After years of clerking, he became a partner in the business concern in which he was trained, and became a successful merchant. He was at one time reputed to be worth three hundred thousand dollars. But in an evil hour he went into land speculation, and lost every thing. He never married, and never removed from the city. For the last twenty years of his life he lived in poverty, barely earning enough to keep soul and body together. He was so poor and so much chagrined at his reverses, that he never came to see us but once after his failure. I paid his doctor's bill, and his funeral expenses. Neither of my brothers left enough to pay for their grave stones. Both of them had better advantages of education, and had every reasonable prospect of succeeding better in life. My four sisters married farmers, educated their families well, saw them all respectably married, and died in their own homes, surrounded by those who loved and cherished them.

"I knew a good many men of my father's age, whose families turned out pretty much in the same way. In this region, nothing has paid so well as farming. Almost every one, with ordinary capacity for business, acquires property, and when old age overtakes him, he has a comfortable home, and no harrassing cares for the future. With my little farm, and stock, I am as independent as a king, and twice as contented. The children and grandchildren all love to come and see us, of whom we have already over forty, and the old homestead will always be a green spot in their memories."

Flax.

This crop occupies the ground but a short time. It follows corn or the small grains in a rotation, and may be followed by turnips the same season. Any soil finely worked, in good heart, free from weeds, not so rich as to produce a rank, uneven growth, and not liable to suffer from drouth, will answer for flax. Two to three bushels of seed are sowed to the acre, according to the quality of the land; never more than two bushels when raised for seed. Sow early in Spring, harrow and roll. When a hand-breadth high, it is well to go through and pull all the tall growing weeds. About the last of July the bottom of the stalks turn yellow and lose their leaves, the seed capsules also become plump and full. If the crop is raised for seed let it stand until fully ripe, but gather before there is danger of shelling; if for the fiber, pull when the ripest seeds have assumed a light brown color. Flax is pulled by the roots, bound in small sheaves, and stooked until dry enough to stack. Or, the seed may be stripped off in the rippling combs at once and the straw stacked. When raised on a small scale, it is usually spread out in gavels as pulled and left to undergo the rotting process. Twelve to sixteen bushels of seed, and a ton and a half of straw, is a common yield. When the cleansed fiber and the oil are alone sold, this otherwise exhausting crop does not exhaust the farm at all.

A Chapter on Castor Beans—Details of Cultivation and Gathering.

The Castor Bean (*Ricinus Communis*), or Jonah's Gourd, is beautiful as an ornamental plant, and for this purpose it may well have a place in every garden. The quick growing, large, tree-like stems, with monster leaves, even in northern climates, confirm what is believed by commentators on the Bible, that the plant which sheltered Jonah, called a gourd, was no other than our castor bean plant. For garden ornament, it is only necessary to plant a few of the beans in hills, or in a drill, thinning out to 18 or 20 inches apart. The stalks grow from 5 to 10 feet high, or more on rich soil. Both stems and leaves are of a dark, purplish color. Within a few weeks past, several subscribers of the *Agriculturist* have personally assured us from their own experience, that wherever the castor bean is planted in a garden, the moles will surely take their departure. It hardly seems credible, but may be so—especially if moles are as easily nauseated as children with the slightest odor of anything like castor oil. In form and appearance, the fruit resembles common small colored beans. The oil pressed from these is the common medicinal castor oil of the druggists, which is sold in large quantities. We have seen thousands of bushels of the beans in bags on steamboats on the Ohio and Mississippi rivers, which were taken in at towns on the banks of those rivers, along Southern Indiana and Illinois, and some we believe from Eastern Missouri and Northern Kentucky. They will grow well any where south of 40°, and probably further north. There is just now a new interest awakened in the cultivation of this crop in the States above mentioned. A subscriber residing in Saline County, Ill., who has grown several crops successfully, furnishes for the *American Agriculturist* the following directions, which are very full:

FIELD CULTURE.—The yield is 12 to 20 bushels per acre. Prepare the ground just as for Indian corn, but without much manure, or the plants will run too much to stalks. As soon as the ground is warm, and the weather settled, say about the first of May, have the surface well prepared with plow and harrow, and mark it off into rows four feet apart. Then cross-mark it at the same distance, but leave between each set of four rows, a space wide enough to drive through a sled, wagon, or cart. The cross rows should run in a direction to admit of the ready entrance to the spaces left for the team. Plant in hills at the crossing of the rows, the same as corn. As soon as the plants are up, draw a little earth around them to keep down grass and weeds, and as a protection against the cut-worm—taking care not to break the tender stems. When well started, thin out to two stalks in a hill. Cultivate the same as corn.

They will commence to ripen the first of August. Place upon a sled, or on wheels, a tight box holding eight or ten bushels. With two men, and a boy to drive the horse, go through the wide rows or spaces, each man taking two rows on either side, and cutting off all the bunches that are beginning to crack. When the box is full, take it to the yard or bean-house. A yard will do in fair weather, as the sun will soon pop out the beans. If in an open yard, smooth off the ground, and set up crotched stakes about four feet high, and twelve feet apart, laying on poles or rails, and spreading the beans over them as soon as cut and hauled in. Boards should be set around to keep the beans from flying off as they fly out. When thus shelled by the sun, rake off the stems, and sweep up and bag the beans like wheat. They should not be allowed to get wet, and it is much better to have a *bean-house* and use fire heat instead of the sun for curing them. This may be, say 16 feet square, and be covered with boards so closely as to retain the warm air. Put in this a furnace, placing it so that the beans can not fall on it, as from their oily character they readily take fire and burn briskly. Place joists about seven feet high, and over these lay slats, two inches wide, half an inch apart; spread on the beans as gathered, and start the fire, and keep it up until they crack out and fall through the slats.

The gathering from the field can be repeated at intervals of a week or less, as the bunches will continue to ripen until frost. I think the castor bean crop improves old land instead of impoverishing it. The stalks left in the field are tender, and can be broken up readily to plow under, by dragging a heavy brush over the field when dry in the Spring.

Sweet Potatoes Easily Grown at the North—Practical Directions.

During the past three years, we have had good home-grown sweet potatoes, produced with little trouble, and cheaper than we could buy them in the New-York markets, to which they are brought in abundance from the Southern and South-middle States, and sold at moderate prices. Last year a garden plot yielded at the rate of 480 bushels per acre, and there was no reason why a full acre, or ten acres, should not have yielded at the same rate. The soil was of but medium quality, neither light nor heavy. It had a moderate quantity of manure worked into the surface. The manure was a month old compost, made of about four parts of muck to one of horse and cow manure from the stable. We attribute our success in latter years to the method of cultivation. The sweet potato, to be sweet and mealy, and to grow vigorously, needs a warm dry soil, with plenty of sun. To secure this in our latitude, on a soil not clayey, but yet not sandy, we plant in high round hills, which let in the warmth of the sun and warm air on all sides, and secure at all times perfect freedom from water. For garden culture we proceed thus: After preparing the ground well, as for other potatoes, sticks 1 foot long are set up about 3 feet apart each way to mark the centers of the hills. With a hoe or shovel the earth is then thrown up around the sticks on all sides, so as to form round hillocks, 8 to 10 inches high. (In field culture a plow run twice in furrows each way, will do the hilling more economically.) When two or three rows of hills are made, the sticks are drawn out, and used for other hills. As soon as all danger of frost is over, and the ground warm, the plants are set—one strong or two weak ones in the center of each hill, in the holes left by removing the sticks, using a little water, if the ground be dry. They can be set almost as fast as hills of common potatoes can be planted. No further care is needed, except to keep the ground free from weeds, as for other hoed crops. The vines grow slowly at first, but after a time they run vigorously, and are at all times ornamental. Our engraving shows the appearance of the vines, with small tubers attached. The plants we have usually bought in the market at trifling cost. They are frequently advertised in the *Agriculturist*. We shall this year raise our own plants thus: The last of March or early in April, the potatoes are put in soil in the hot-bed, or, if need be, in a box of rich earth set in a warm place. They send up a multitude of sprouts with roots attached; these sprouts are broken off from the tubers, for setting out at the proper time.

FURTHER NOTES.—About the first of March, J. C. Thompson, of Staten Island, sent us some sweet potatoes of his own growth, excellently preserved, and as good as any we have ever tasted at any season. From his full description prepared for the *American Agriculturist*, we add a few extracts on points not referred to above. "....Sweet potatoes may be grown in hills or in ridges; the latter require least labor.... Light sandy loam is best, because it is dry and warm, but small tubers may be produced on quite stiff land, and even on sward or old pasture land thus: Turn two furrows nearly together to form the center of a ridge once in three feet, filling in the open space between the upturned furrows with a light, rich compost to form the center of the ridge, and in this set the plants 18 inches apart. It is better not to disturb the ground *under* the ridges, for then the tubers will not grow long downward, since they meet the hard soil, but they increase in diameter and become nearly round, which improves their appearance and quality. The secret of getting round, smooth, chubby sweet potatoes, instead of long, slim things, is to have a hard bottom under them....Fine, or half-rotted manure will do, using it in the whole soil, or in the hills or ridges, in the same quantity and manner as for the Irish potato....The best time for planting is toward evening, using a little water in the holes, if the ground be dry, covering it over with dry earth, to absorb the excess and prevent baking....If in rows in the garden or field, these should run north and south; as the vines extend, lay them lengthwise on the rows, to allow the sun free access to the sides....Last season I planted sweet potatoes in rows 4 feet apart, with rows of carrots between, and from a plot 50 by 100 feet obtained 17 barrels of sweet potatoes, and 48 bushels of fine carrots. Three feet is the proper distance apart for the vines when grown alone, with the plants set 16 to 18 inches apart in the ridge....The *Nansemond* variety is the best for the North....In August and September the largest potatoes may be taken out for use, leaving the smaller ones to continue growing. Run the finger into the ground near the stem, and when a large tuber is found, remove a little of the earth, detach it from the stem, take it out, and place back the earth." [We have practiced this successfully. ED.] "When frost kills the vines, choose the first clear dry day, dig until noon, let the

tubers lay on the ridges to dry, and before dew falls, pack them in barrels, in the field, with plenty of *dry cut* straw, and then store the barrels in a moderately warm, dry place for winter."

Borecole, or Green Curled Kale.

GOOD "GREENS" DURING ALL THE WINTER.

Here is a most valuable plant which is common in Europe, but is as yet little known among our American readers, though an old friend and favorite upon almost every German table. During the past Winter, while frost and snow have cut down almost every other green thing in our vegetable garden, the borecole has bravely held its position, thrusting its beautifully curled green leaves above the snow when not too deep, and always ready to supply a most agreeable dish of tender greens. We appreciate it more than ever before, and commend it to every reader of the *Agriculturist* having a rod of ground.

In the books it is called *Borecole*; in our seed list (No. 196), we use the common name, *Green Curled Kale*; in the German it is called *Grüner Kohl*; and it is also known as *Scotch Kale*, and *German Greens*. It belongs to the *brassica* or cabbage tribe, and grows similarly to the cabbage, but is without the solid head; it yields a thick mass of leaves beautifully curled, which are free from heavy coarse stems; it endures the most intense cold without injury, being improved for table use by the effect of frost. It is left out during winter, and cut as wanted for the table, even when necessary to dig it out of the snow. It is boiled like other greens, the water pressed out, and served with a little salt, butter, and pepper, to suit the taste, and eaten with vinegar when liked. The leaves are also chopped fine and used in soups. It is remarkably tender, and more palatable, more easily digested, and as nutritious as cabbage—but always better after exposure to frost and snow.

The culture is quite as easy as that of cabbage; a poorer soil is preferable, as in rich or highly manured soil the leaves grow too rank to endure freezing perfectly, and the coarser leaves are less delicate eating. There are large and dwarf varieties, the larger being preferable, as the under leaves make good cattle food, while the inner tenderer leaves may be used for the table. The plant is well worth cultivating as green fodder for animals of all kinds. Our poultry devour all the bits of leaves left. Sow the seed at any time from the last of April to the first of June, in a bed the same as cabbage seed, and transplant like late cabbages upon plots where earlier crops have been removed. It requires no further care except to hoe and keep down weeds. In this latitude, and further south, it is best to plant such portions as are desired for use in the latter part of Winter and early Spring, where they will be shaded by buildings or fences; the sun alone, and not cold, injures it. When cut in Winter, leave the stems, and they will sprout again for spring greens; these may be transplanted to occupy less space.

Noon Marks.

Before Connecticut clock factories turned an article of luxury into a common-place piece of kitchen furniture, they frequently made a noon mark of the house or barn. It stood on a due north and south line, so that when the sun ceased to shine on the east side of the house, it was just noon. Could we mark exactly the shadow of a distinct perpendicular edge, we might know pretty nearly when the sun passes the meridian. This is commonly considered noon, but it is not exactly the true noon, except at four periods in the year. One of these periods occurs about the 15th of April, this year, and a noon mark then made, as some one by a quadrant observes when the sun passes the meridian, will indicate the true meridian or north and south line. A better way still is, to make a meridian line with a "compass," allowing for the variation of the needle at the time and place where it is made. If a person has a very accurate watch and can get the exact time for his locality, a noon-mark may be made any day by marking the edge of a shadow as many minutes, before or after 12 o'clock by the watch, as are stated in almost all of the almanacs under the column headed "sun on meridian."

Fig. 1. Fig. 2.

Clearing-Holes in Earthern Pipes.

Large pipes made of earthern-ware or brick clay are beginning to be more highly esteemed, and justly so, for they answer a variety of ends. The hard *glazed* pipes, 3 to 6 or more inches in diameter are cheap and very useful for drains to carry *off* water. The *unglazed* pipes, or those nearly so, are cheap substitutes for iron pipes to convey hot-air in a green-house, as was shown in the articles on "Green-Houses for the People," in the *Agriculturist*, last Autumn. They are

Fig. 3.

placed together, as in fig. 3, the joints being closed with some kind of mortar. After a time these may get partially filled, perhaps clogged, with soot. Our gardener, F. Otto, gives us a sketch of a convenient "trap" or cleaning hole for such a series of pipes. Every fifth or sixth two-foot pipe is provided with an opening as shown in fig. 1. The earthern-ware cover, fig. 2, is made to fit closely on this, to be stopped tightly with the mortar. To clean the pipes, it is only necessary to remove the cover and run in a wire with a bent end, or a wisp of straw on the end, and by moving it backward and forward draw the soot to the opening where it may be taken out. A similar arrangement would be convenient in drain pipes. The openings would be accessible on removing the covering soil, directly over where they are placed, and any obstruction could be taken out, without disturbing the pipes.

Usefulness of Charcoal in Agriculture.

In reply to several inquiries, we say that charcoal is useful. Whether it acts directly and specifically as a manure, to any perceptible degree, may perhaps be questioned. Whether it decomposes at all may well be doubted, but it acts as an excellent absorbent of gasses and liquids, and so contributes indirectly to the fertility of the soil. Even sparingly used, it increases the warmth of land, darkening its color. When prepared in the old-fashioned way,—piling together twenty or thirty cords of hard wood, and covering it with sods, etc.—we get not only good coal, but also in the sweepings, refuse coal, and dirt around an old pit, a good deal of potash, soda, lime, and some phosphorus. Besides the effect of charcoal and ashes, we have also that of "torrified" or baked earth which is often of considerable importance. Every experienced florist will tell us of the fine effect produced by it, when spread in coarse lumps on the surface of his pot soil. Who has not observed how charcoal dust gives the grass of lawns a dark, rich luster? An acquaintance of ours who frequently burns coal for market, collects the refuse dust and ashes from his hearths, and mixing it with common soil, about half and half, spreads the same over his grass and wheat fields at the rate of about five cords to the acre. The effect, he assures us, is quite marked. The superior greenness of his fields so treated, is noticeable to every passer by. Another farmer uses the leavings of his "coal-hearths" for mixing with manure in his stables, and as a deodorizer in drains, privy-vaults, etc. This compost he uses on corn, potatoes, and cabbages, and where it is used, he has no trouble with worms of any kind, and his crops are large and of the first quality. Cases are not uncommon where charcoal dust is thrown into hog-pens, and in other ways incorporated with offensive manure, uniformly deodorizing the manure, to some degree at least.

In an old garden, once under the writer's care, worms and vermin of various sorts infested the ground. It was almost impossible to raise crops of radishes, beets, onions and cabbages. Lime and salt were tried, but with little apparent benefit. At length, we spread a coating of charcoal dust and salt over the entire surface, and worked the mixture in thoroughly. From that day to this, the worms have diminished, and now are few and far between—killed or driven away by the treatment, we know not which. Another year, we mean to use the same composition under our currants and gooseberries, to see if it will not kill out the moths; and around our young fruit trees to drive away the borers. For young evergreens, and all trees, we presume charcoal dust would prove an excellent dressing.

Wheelbarrows for Farm and Garden.

A good wheelbarrow is a very important implement for both farm and garden, saving cartage, carrying small loads where neither cart nor wagon can go, a great convenience in distributing manure, collecting fruits or crops, moving barrels, and the like. The common form, with flat bottom, movable side-boards and a large wheel, is very convenient for carrying whatever is to be distributed by the shovel, or which should stand upright, as potted plants, or for going through narrow gateways or between close rows, for loading some heavy articles as barrels, and for many other purposes. The common "Railroad Barrow" shown in the annexed drawing is preferable on several accounts. It is much cheaper, costing from $1 75 to $3, according to size and quality. The wheel though smaller is more under the load and thus supports more of it. It may be loaded almost equally well from all sides, the sides being low. The loads are easily "dumped." It may be used for carrying semi-liquid or dripping substances, and is easily arranged to carry grass or hay, by laying in sticks pointing outward on all sides.

(PRIZE ARTICLE.)

On the Cultivation of Indian Corn.

BY ABRAM V. TRIMBLE, CHESTER CO., PA.

Corn succeeds in all varieties of soil possessed of requisite fertility—excepting some which for want of draining are wet and cold for too long a time in the Spring. The only limit to its cultivation appears to be climate, as it requires hot sunshine and a sufficient length of time between hard frosts to allow it to grow and ripen; this for the different varieties will take from four to six months, but if cut before frost it will ripen considerably in the shock.

PREPARATION OF GROUND.

Corn is much planted on a fresh break of sod, and made the first crop in a five years rotation. It will, however, succeed for many years on the same ground, if the strength is kept up by a proper application of manure. Sometimes (in Pennsylvania) wheat or rye is sown at the last working of the corn and pastured through the winter by sheep or cows; and sometimes the corn is removed when cut and the ground sown with winter grain. The first preparation of the ground should be *thorough drainage*, where it is needed, for no crop is more affected by water standing in the soil than this. If surface draining must be resorted to, the best plan is to plow the land in ridges and plant on the top. This will also give more nourishment to the corn in very thin soils; but, except in extreme cases, it is not advisable, as it leaves the ground rough or uneven, and interferes with good cultivation.

Some farmers object to putting fresh manure on corn land, because it makes weeds grow; but, with me, this would be a reason for applying it to this in preference to any other crop, for there is no other in which the weeds are so easily kept down, while destroying them keeps the ground loose. I generally put the manure on the sod the fall before; when put on immediately before planting, if it is coarse and not very well rotted, it will have to be plowed in; but, if it is fine enough to admit, it is best applied after plowing, and harrowed in. The quantity of manure used only be limited by the available supply; I never knew corn to suffer from too much manure. At the same time excellent crops may be raised on new land, or on old sod without any manure. I apply the bulk of the manure to the corn crop, but give a light coat to the wheat. Manuring in the hill, either before planting, or after the corn is up, is sometimes practiced; but manuring the whole surface is better, if it can be done. Though the manure next the seed helps to start the corn, it is of very little consequence after the roots begin to spread over the ground, and there will be little difficulty in starting the corn provided the soil is properly prepared.

PLOWING.

This may be done any time that the ground will admit of it, from the middle of Autumn until planting time. For stiff, clayey soils, Fall plowing is best; it also destroys the cut worm and the seeds of a great many weeds. Sometimes it is considered an object to have the sod for early pasture in the Spring, as it furnishes a good bite for milch cows, etc., before it is necessary to plow it, and while the permanent pasture is too young. In this latitude, if sheep are fed on it in mild weather through the Winter, they will give it an excellent coat of manure. In plowing, leave as few dead furrows in the field as possible. If the ground is nearly level and the shape of the field will permit, the best plan is to begin in the middle and throw the furrow inwardly, leaving a furrow all around the outside, [that is, "back-furrow" the whole field.] This, however, will depend on the number of times the field is to be plowed in the rotation; as, the next time, the furrow will have to be thrown towards the fence and the last plowing before seeding down should always be towards the middle. Do not lay the furrow flat, but edge it so as just to cover all the grass. The depth of plowing will depend on the depth of the soil. If your soil is not as deep as you can run the plow, turn up a little of the subsoil each time, thus gradually deepening it. Subsoil plowing will be of advantage, especially where the top soil is thin. Remove all the stones to the depth that you plow. Give the ground a thorough harrowing, going first the way it was plowed, then crossing until the surface is perfectly mellow.

MARKING OUT AND PLANTING.

If you are going to plant in hills, the next thing in order will be marking out. This is generally done with the plow, running to a pole set up at each end, and others along the row as you can see them, if you can not see through, marking double width as you go towards the poles, and returning through the middle space. I have used for several years a simple and very effective implement for this purpose, which can be made by any person who can handle tools, (fig. 1). Make a cheap axletree of such a length that the wheels tracks will be just twice as far apart as you wish to make your rows. Fit on a pair of light wagon wheels, and fasten a tongue firmly to the middle of the axletree. Half way between the middle and the track of each wheel, fit two pieces of scantling, four inches thick (extending to the ground and rising a little above the axle) so as to slide freely up and down, but not

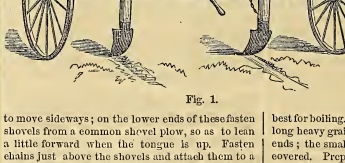


Fig. 1.

to move sideways; on the lower ends of these fasten shovels from a common shovel plow, so as to lean a little forward when the tongue is up. Fasten chains just above the shovels and attach them to a piece fastened across the tongue just behind the evener; shortening or lengthening these chains will make the shovels run shallow or deep as wanted. The uprights should be connected at the top by a piece bolted to them, leaving the bolts very loose in the holes, so that each slide can work independently, and a lever should be arranged to lift the plows out of the ground in turning. This machine will mark two rows at once, and by keeping one wheel in the old track, a good driver can, after a little practice, keep very straight without poles. Rows straight and uniform look better, and add much to the convenience of cultivation. The furrows should be just deep enough not to disturb the sod. The most common distance apart in Pennsylvania is four feet each way. The distance however, depends on the kind of corn, some of the small growing kinds being planted much closer. The following rule will, I believe, apply to all cases. Estimate how many bushels you will attempt to raise to the acre. Put it at one hundred; not that it is often reached, but because it may be reached. There are well authenticated instances of much greater crops, but this will do *to begin with*. Find the weight of corn on a good, full sized ear of the variety you intend to plant; and dividing the weight of 100 bushels by it you will know the number of ears you want to raise on an acre, supposing them all equal to your standard. If the corn is of a kind that generally bears one ear to the stalk, the number of stalks will, of course, be the same. Do not calculate to raise more than one good ear to a stalk, and having the number of stalks in an acre, divide this by the number in a hill (say three). This will give you the number of hills to the acre. The number of square feet in an acre is 43,560, which divided by the number of hills gives the number of square feet required by each hill, and the square root of this number is the distance the hills should be apart. In no case, however, should the rows be less than three and a half feet apart for convenience in working. If this will not make it thick enough it will be better to plant in *drills*, making it close enough in the rows to give the required number of stalks. The advantage of a plan like this is, that it is founded on, first raising good ears, and then as many of them as possible. Drilling is a very good way of putting in corn if you are certain of having help enough at the right time for thinning and keeping clean. As it can only be worked one way by horse, more has to be done by hand labor.

PLANTING

may commence as soon as the ground is warm and all danger of hard frost is over. In this latitude (40° N.), this will be from the first to the middle of May; but I have seen very good crops that were planted as late as the first of June. The greatest danger in late planting is the liability of injury by frosts in the Fall. In selecting seed, more attention should be paid to the appearance than the name. There is scarcely any end to the varieties raised, and the same kinds have different names in different sections of the country. You will have to be governed in your selection very much by climate—some kinds requiring a much longer season than others. At the North, Dutton, little Canada, King Philip, and many of the eight and twelve rowed yellow and white flint varieties are favorites. The large gourd seed, a strong growing and not very heavy variety, is much raised in the middle States, and requires a long season. Southern white is much raised at the South, and some persons here prefer it for cooking. Stowell's evergreen is one of the best for boiling. For seed choose good sized ears with long heavy grain and small cob, well filled over the ends; the small end of the cob should be entirely covered. Preparing the seed with gas or common tar will prevent birds taking it. To do this, soak the seed about twelve hours in cold water, then pour off the cold, and pour on warm water just below the boiling point, enough to barely cover the corn. Dip a paddle in the tar or pour a little on the corn and stir till it is all coated with the tar. A very little of the tar will go a great way. When you have it completely coated, drain the water off and sprinkle on plaster, stirring it up with the corn until it becomes thoroughly dried and the grains separated. If you are not sure of all your corn growing, drop enough in each hill to be certain of having enough, and thin down to the right number of stalks after it gets well started. If the seed was properly saved, there will be very few grains that will not grow. Thinning corn, though apparently a very simple operation, is very hard to do well. Some of the stalks will break off in the ground, leaving the roots to grow again; and I have found very few men or boys who would always leave just the right number. When birds and other depredators commence on a hill, they generally take it all. My experience is, that three stalks to a hill will bring more corn than any other number, and I make the hills three feet ten inches apart each way. Cover the seed with a hoe about two inches deep, taking care not to put on lumps or stones.

PUMPKINS AMONG THE CORN.

It is a common practice to plant pumpkins among corn, and about it there is a variety of opinion. Some assert that they take no nourishment from the corn, and others, that they deprive it of more than their value. The truth probably lies between the two extremes. They most likely take some nourishment that would otherwise go to the corn, and a great deal that would not. If your only object is to raise a large crop of corn, leave pumpkins out. If you want to get the greatest possible return from

your land, plant them. Two seeds in every other hill and only in every other row will be enough.

AFTER CULTURE.

As soon as the corn is fairly up, so as to show plainly in the rows, I commence going through it with the "cultivator," twice in each row, as near to the corn as possible without disturbing it, replanting any that is missed. If planted in rows both ways, I work it first one way, then across. I aim to keep down all weeds and grass all the time that the corn is growing, hoeing where it can not be reached with the cultivator and pulling the weeds by hand where necessary. When the corn gets about a foot high, or as soon as I can get through without covering it, I go over it once each way with a double shovel plow, twice in a row. Afterwards, use the cultivator as long as I can get through it without breaking the stalks, using a short whiffletree when it gets high. After it gets too high to take a horse through, I keep down all the weeds that appear with the hoe or by hand.

ENEMIES.

Blackbirds, crows and other birds are sometimes troublesome in taking up the seed, both before and after it comes up. This can be prevented to a great degree by preparing with gas tar, as directed. They also sometimes take a considerable quantity from the ears while it is standing; but, on the whole, they do the crop a great deal more good than harm by the immense quantity of worms which they destroy. Rats and mice destroy the corn in the shock and after it is stored if they can get at it. Mice also sometimes take the seed in the ground but not often, unless, as some say, they follow in the tracks of the moles. It is the opinion of some people that moles do not eat corn, but be that as it may, I have always found it missing when it came in their way. Cultivation interferes considerably with their operations by breaking up their underground passages. When you replant, leave their tracks undisturbed and plant a little on one side. They will seldom go out of their way. (In replanting generally, do not break the ground any more than you can help.) Ants sometimes do the young corn great injury by making their hills around the stalks, especially after it has been cut off by worms. A dose of ashes will drive most of them away. Scratching around the stalks also clears them out. The cut worm is a brown worm about three-fourths of an inch long when fully grown, but commencing its ravages when it can scarcely be seen. It cuts off the young shoots at the surface of the ground. It is most active in cool and cloudy weather, the hot sun driving it into the ground. The corn generally grows out again and often does not appear to sustain any permanent injury. Plowing in the Fall is a partial preventive, probably destroying the pupæ or the eggs by exposing them to the cold. The most effectual remedy would be to let alone those birds which eat the worms. "Heart worm" as it is called, affects corn in all varieties of soil. It is not settled whether this is caused by an insect or by some peculiar property of the soil. It is not a want of general fertility, for the same places bring good crops of other grain and of grass. Neither is it altogether attributed to wet ground, for I have sometimes seen it in very dry places. It is, however, most common in stiff, cold clays. The corn thus affected appears suddenly to stop growing, sometimes after making a very fine start. After a time, generally as it begins to ear, it falls partly down, the stalks falling away from each other. The ears on such stalks are seldom well filled and do not ripen well. The roots have a blackened and blasted appearance, and some of the main ones are entirely destroyed. I have sometimes found a small red worm among the roots so effected; but whether that is the cause of the mischief or not, I am unable to say. The ground where corn is thus affected should be thoroughly drained, if at all wet, and the corn kept growing strongly by a liberal application of manure.

HARVESTING.

If the corn is to be shocked on the ground, make the "horses" (four hills tied together for supports,) as soon as the blossom is fairly off. A convenient size to make the shocks is six rows each way, making thirty six hills to the shock. The horse should be made of four hills, leaving four rows each way between the "horses." Take two of the hills that are diagonally opposite and bend them together, crossing the tops. Lap the tops of one of the remaining hills once around the tops thus crossed, and gathering all together in an upright position, lap the tops of the remaining hill around all and tuck in the ends to hold them fast. If the corn is drilled you will have to make the shocks in rows one way and estimate the distances the other. By making the horses early you have them secure in case the rest of the corn is blown down. Commence cutting as soon as the husk on the ears begins to die, or sooner if hard frosts are apprehended. If cut green, care should be taken to let all the buts touch the ground and to spread it evenly around the shock so as not to have too much in one place. The most common implement for cutting is a knife made of a piece of an old scythe about two feet long. Take hold of the tops with the left hand, or gather them in the arm and cut the hill with a stroke slanting from the ground upwards. Cut low enough to keep the ears off the ground, set up carefully, with an equal quantity on each side of the horse. The accompanying diagram will show how to cut a shock to the best advantage. Begin with the hill marked 1, and cut in succession, 1, 2, 3, 4. Thus you will finish each armful at the shock and save much carrying. You also secure an equal quantity on each side of the horse, making two armfuls or eight hills to the shock. This may seem too simple to mention, but most men slash away till they get as much as they can carry, often finishing as far as they can get from the shock, and piling the stalks without system on whichever side comes handiest. The shocks should be bound by a band of rye straw or by a couple of stalks, *first broken between the joints;* after passing them around as low down as you can make them reach, draw tightly together, wrap the tops

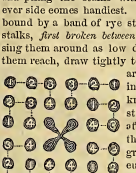


Fig. 2.

around the buts and tuck in. The stubs should be knocked off with a sharp strong hoe immediately after cutting the corn, as they cut much easier while green. The practice of cutting off the tops and blades, leaving the stalks with the ears on standing till husking time, is not so customary here as it used to be, but is much more common at the South.

HUSKING may commence as soon as the corn is ripe enough to keep, which, here, is generally about the middle of October. In husking a shock, we first cut off the horses, then pull the shock over, so as to make four shocks fall towards each other, throwing the corn into a heap between. The more care taken to spread out the shock evenly, the less time will be required to husk it, and the fewer ears will be left in the fodder. The best husking pegs are of iron with two holes to pass a strap through, which goes around the two middle fingers; the end a little bent to fit to the forefinger, and the point flattened and a little hooked. Leave the husk on the stalk and when the shock is husked tie up the fodder in bundles with bands of rye straw. In gathering up the bundles do not push the fodder together, but rather *roll* it; this makes a solid sheaf. We put the fodder from sixteen shocks of corn into one stook. A good husker will husk and tie up the fodder of from thirty to fifty shocks in a day. Select the most perfect and best ripened ears for seed. These should be kept in a place where there is no danger of freezing; a very good place is on a rack hung up in the kitchen or some other warm room; or the husks may be left on to hang them up by. I have had corn kept in this way, every grain of which grew, while that kept in a cold place did not half come up. Pick out all the sound ears and put them in the cribs, keeping the nubbins or soft corn separate to be fed out first. If the weather be warm or the corn not very dry, do not pile much of it together. We use cribs not more than five feet wide, and twelve feet high, the sides of strips just close enough together to prevent the ears from falling through, and the roofs so made as to be raised up on one side to allow the cribs to be packed full. There should be a door in the side or end of each for taking the corn out. To keep out rats and mice, set the cribs two feet above the ground, on posts firmly planted and topped with tin.

The fodder may be kept, either in the barn or in stacks. If put in a mow it should be very dry when taken in, or it will mold. Make the stacks of a little less in width than the length of two sheafs, about 12 feet high and as long as you please, laying the tops together and keeping the middle full by an occasional extra course on top. Towards the top draw the sides in nearly to a peak; and top off by setting sheafs upright on each side and bending the tops together.

The corn is shelled by machines run either by hand or horse power. It should not be shelled until wanted to sell or for use, as it keeps much better in the ear. If going to market, it is run through a fan mill after shelling to clean it from dust, pieces of cob, etc. It is sometimes sold in the ear, and then a double bushel is given, or seventy lbs.—fifty six being the standard weight for a bushel of shelled corn. The proportion between the corn and cob varies much, however, in different varieties and stages of dryness and ripeness. The best time for selling is whenever it will bring a fair price. The *best* way of disposing of it is to feed it on the farm. Some of our best farmers will never allow an ear to go off their land, except in the shape of beef, mutton, pork, poultry, butter, etc.—justly considering that they gain more in the manure than they loose in the price of the corn.

Boussingault says, "This is the true wheat of the Americans," and indeed it seems peculiarly adapted to our wants. Growing in all kinds of soil, and a wide range of climate, and furnishing food for man, and all kinds of domestic animals, it is almost impossible for an American farmer to imagine how any people have ever done without it. It is certainly the most economical grain crop that can be raised. The yield is greatest both for the ground and the seed—sometimes producing a *thousand fold*, thus requiring but a very small proportion of the crop to be kept for seed. The stalks are of more value for fodder than the straw of any other grain and the cobs are worth a good deal for fuel.

Cotton Cultivation.

The impression that the culture of cotton is not understood at the North, should deter no one from at least experimenting with it. It may be raised precisely like corn, in drills, or with a single stalk in a hill, for it branches in all directions. Plant the upland, or furzy seed, on rich soil, as soon as danger of frost is over. The rows may be 4 feet apart, with seed 9 to 10 inches distant, removing half the plants if all vegetate. If seed is plenty, plant still closer to secure a good stand. Cover with fine soil one inch deep, and then treat the field as though it were corn, using the horse and hand-hoe to keep down weeds. As soon as the first bolls open, pick the cotton; and repeat the operation at intervals as successive bolls ripen. Early frosts will very likely cut off a portion of the crop, but if the season is at all favorable, enough will mature, south of 40°, to pay for the trial. Besides, there is no doubt that persistent efforts, using the earliest matured seed of that grown at the North, will so acclimatize the plant that it may be grown in much higher latitudes than at present. The prospect now is, that the amount of cotton planted at the South this year, will be far below the usual quantity, so that northern grown cotton will probably find a ready market. New or pretty rich soil, is best for the cotton plant. It is considered somewhat exhausting to the soil—unless kept up by manuring. See our large prizes for specimens to be exhibited at the *Agriculturist* office next Autumn, (February number, page 64.

WANT OF CONFIDENCE—FROM A PAINTING IN THE ROYAL ACADEMY, BY GEO. THOMAS, (LATE OF NEW-YORK.)

(Engraved for the American Agriculturist.)

No animal awakens stronger affections in man than a good horse: when well treated, a faithful friend, a willing servant, a patient drudge—discriminating, forgiving, self-sacrificing, courageous, ambitious and proud: when abused, obstinate, willful, and treacherous, to the last degree. He shows his character in his eye, and while a child will shrink from one with fear, it will approach another with confidence. Even the great rough head in such close proximity to the tender child, (as seen in the picture above), causes no fear, and we can see the growing confidence which will soon proffer the fragrant clover heads. Tim Bunker gives an affecting history of his family mare, on another page; and this beautiful picture will pass well for a portrait of "Old Rose" and 'Squire Bunkers' grand children. A horse trained by kindness to find his highest pleasure in the society and doing the will of man is not "broken" at all, but made a firm friend. To "break" a colt indicates to most minds a beating, bruising, pounding, whipping operation, out of which the colt comes, saddled, bridled, and broken to halter, bridle, saddle and harness; and doubtless many a colt is thus treated, and broken in spirit and spoiled in temper. May we not lay this abuse to this use of the word *break*. The only idea that should be conveyed and the only practice suffered, should be that of a firm, gentle control, winning the confidence and inspiring willing, affectionate obedience, on the part of the horse. Thus may be developed all those desirable qualities which his fine nature possesses, and we be put in possession of an honest, faithful companion, and helper for the term of his natural life.

Six Best Shade Trees (Deciduous).

The inquiry is often made of us—which are the best half-dozen shade trees? It is said that one man praises this tree, another that, and another that; which do long experience and observation prove to be the best? An important question, which the writer will try to answer.

1. *The White Elm* (*Ulmus Americana*).—Some persons would, perhaps, give this post of honor to the Sugar Maple; but we think that, all things considered, it belongs to the Elm. Nor do we forget the merits of other species of this tree. The Dutch cork bark elm is very hardy, luxuriant in foliage, and rapid in growth, but it lacks the loftiness and graceful dignity of our native tree. The English elm, in its several varieties, is very fine, and so is the Scotch; whoever has room for an assortment, should include these. But the noble native tree must bear away the palm. It grows in nearly every part of the country, is easily transplanted, and grows rapidly.

2. *The Sugar Maple* (*Acer Saccharinum*).—Not lower than the second place, surely, must we put this tree. It is a sober, matter-of-fact tree, with some of the graceful poetry of the elm; its branches do not droop and sway, and float about with the caressing wind. It has a round, bushy head, makes a dense shade, and has a breadth and massiveness of foliage which is really refreshing to behold. Some persons insist that the *Scarlet flowering* (*Acer rubrum,*) is most ornamental. Every tree-lover delights to see its gay red tufts opening in early Spring, before a single leaf appears on any tree, and when the only signs of reviving vegetation are the adventurous catkins on the willows and poplars. Then, too, it grows rapidly, and grows everywhere. And it has a certain freedom and play of the leaves, which we do not find in the other species. Others stand up for the *White leaved Maple* (*Acer dasycarpum,*) which differs from the scarlet chiefly in having pale flowers, and a silvery under-surface to the leaves. The *Black Maple* (*Acer nigrum*), is a favorite with some persons. It differs from the rock maple chiefly in its larger and more leathery leaves; the bark is also darker. Nor must we fail to commend the *Norway* species, which has singularly fine foliage, hanging in dark, rich masses. But for general planting, the old Sugar Maple stands at the head. Its leaves open early in the Spring, they are of a dark, healthy green in mid-summer, and in the Autumn take on all the rich shades of gold, scarlet and crimson.

> "Tints that the maple woods disclose,
> Like opening buds or fading rose,
> Or various as those hues that dye
> The clouds that deck a sunset sky."

If any one wants to try his hand at grouping trees, and to be sure of making no blunders, let him set the scarlet and sugar maples and the white ash together, alternately, and the effect will be very fine. And to give his picture a little deeper tone, work in a few evergreens.

3. *The Oak* (*Quercus*).—This monarch of the forest is less commonly planted than some other trees, because of the difficulty of moving it when large. Cut off the tap-root, and root prune once or twice while the tree is comparatively small, and it can be easily handled afterwards. No one will dispute the high claims of this tree. Its wood is valuable for many purposes. It is a most hardy tree, and lives to a good old age. It has a certain grandeur and sturdy majesty, really elevating. The poetic and historical associations connected with it are such as no other tree can boast. It must stand very high on our list. Of the forty different species of oak in America, the most common, if not the best, is the *White Oak* (*Quercus alba*). In deep soil, it often attains to seventy or eighty feet high, and the branches stretch wide on every hand. It may be distinguished in Winter from other species by rough, whitish bark, and by the dry leaves which adhere to it through all the cold season. —The *Scarlet Oak* (*Q. coccinia*)—so-called from the tint of its leaves in the Fall. The foliage takes on its purplish crimson hue quite late, and is singularly rich. It is a noble tree, grows as lofty as the White Oak, and is a fine tree for grouping.—The *English Royal Oak*, (*Q. robur,*) is a grand old tree, lofty, and spreading its huge arms over the ground magnificently.—Beside these, we have the Rock Chestnut Oak, the Chestnut White Oak, the Yellow, the Pin Oak, the Over-cup White Oak, etc., all of them hardy and desirable in a collection.

4. *The Linden* (*Tilia Americana*)—more commonly known as the *basswood*, is desirable for its rapid growth, its large healthy looking leaves, and its round, symmetrical form. The wood is rather tender, and the tree liable to bruises. The foreign species is popular at home as a park tree.

5. *The Ash* (*Fraxinus Americana*).—The White Ash makes a handsome tree, in its general outlines, in the smoothness of its limbs, the unchanging green of its foliage in Summer, and its beautiful purplish tints in the Fall. The *Mountain Ash* (*Pyrus Americana*), is one of the best trees planted (if we allow ourselves to include under the Ashes a tree properly an Apple). The European variety (*Pyrus aucuparia*) is finer than the American. They are both particularly suited to small grounds, being trees of medium size.

6. The *Cucumber Magnolia* (*Magnolia acuminata*). One of the noble aristocratic family of magnolias, gaining its common name from the appearance of the young fruit which somewhat resembles a green cucumber. It is the most robust member of the family, being found *wild* as far north as Niagara County, New-York. It often rises to eighty or ninety feet in hight. The bark of trunk and limbs is symmetrical and handsome. The leaf buds in Winter are covered with a white, velvety down, which is conspicuous. The leaves are often six inches long and four broad, and of a bluish green color, white underneath. Its flowers are six inches in diameter, of a yellowish white, and slightly fragrant. This tree should be transplanted when small, as its roots are succuleut and brittle, and do not easily recover from injuries. We put this tree last in our list, but not because it is least deserving. For amateurs, it will almost rank number one.

The above is our list of six excellent shade trees. We have not forgotten the merits of such trees as the Walnut, Chestnut, Beech, Tulip, Buttonwood, Birch, Willow, and Horse-chestnut; but these have greater defects than those we have first named. May many of them be planted throughout the country, this very Spring.

Ribbon Gardening.

This is a method of arranging plants so as to represent ribbons or scrolls. It is easily performed by any one, and is a pleasing addition to even the humblest yard. A curved or wavy bed is cut out in the smooth turf of the lawn, say four feet wide and ten or fifteen feet long. Certain suitable colors for the ribbon having been fixed upon, (perhaps red, white and blue,) plants are to be selected which will give these colors. No one set of plants is better for this purpose than verbenas. A row of scarlets or crimsons is set on one side of the bed and along its whole length; next, a row of whites and then a row of blues. These as they grow are to be pegged down and confined to fixed limits so as to represent stripes of color. Geraniums may be used for the same purpose, though they make a coarser ribbon, and give only the different shades of red, pink, and white. I used, it will be quite effective to set either a golden or silver-edged variety on one edge of the ribbon. Petunias, Ageratums, Pyrethrums, Cupheas, etc., answer very well in making ribbons. Annuals may be used for the same purpose, but they do not come into bloom until late in the season. German Asters, for instance, their different colors arranged in rows, make a grand display. Portulacca, Candytuft, Phlox Drummondii, Eschscholtzia, Clarkia, and others of like habit, are quite desirable. These ribbons, to be most effective, should be *looked down upon* from above, say from a window, or balcony, or high porch. The grass around them should be kept shorn quite short and smooth, and the colors kept rigidly confined within their limits.

[PRIZE ARTICLE.*]

On the Cultivation of Flowers.

BY A. J. C., NORWICH, CONN.

The Location.—Fortunately for that large class of cultivators who, in selecting a plot, have only "Hobson's choice" (this or none), there are flowers enough which are not so dainty but they may be successfully cultivated in a soil that affords sustenance for any sort of vegetable growth. Certain kinds may be found to flourish under almost every conceivable variety of circumstances. Let those however who have any considerable space from which to select a spot to devote to their floral pets, bear in mind that the action of the rays of the sun, the great delineator of all the gorgeous shades and delicate pencillings which give to flowers their almost unearthly beauty, is of the first importance to every garden. For those kinds which require a partial shade, such as Pansies, Fuchsias, etc., a sheltering wall or building, or even tree, (the former two preferable) can generally be found; if not, any person with a tolerable share of ingenuity can devise a screen of some sort for this modest sister-hood.

The Soil.—The different varieties of flowers require as many different varieties of soil to bring them to perfection, it would be hard to find a locality where many kinds would not flourish, at least moderately. Lightness of soil is always more or less a desideratum, and the various degrees of richness are easily attained by adding more or less fertilizing material, according to the wants of the plants to be grown in any particular spot. Flowers will not flourish without suitable nourishment any more than a crop of wheat or potatoes. If you have a stiff clay soil, dig in a good proportion of sharp sand, and do not imagine that lightness is necessarily incompatible with richness.

Manures and Tillage.—The best fertilizers, for land not too much exhausted, are common barn-yard manure, and leaf-mold, both well rotted, and which, to have the best effect, should be applied in the Fall. Cause the soil to be thoroughly dug and pulverized, and spread with manure. A slight sprinkling of sulphate of lime (plaster) prevents the evaporation of gasses, and holds them for the benefit of the future vegetation. It is not absolutely essential that this be done in the Fall rather than in Spring, but there are several important advantages gained. By being loosened and thrown up, the soil is laid open to the action of the frost, which renders it light and friable. If the ground be left in ridges, a few sharp freezings will destroy much of the latent insect life which it contains, and which, if left unmolested, will not fail to prey upon your choicest plants the ensuing Summer. The Winter snows, too, bring down with them a large proportion of ammonia, which affords nitrogenous food for plants, and

*The Committee worked long to decide between the above and three other excellent articles. This seemed most practical. They will probably all be soon published in some form.

which, of course, is more fully absorbed by ground prepared for it, than by that left hard and stiff. The elements of manure act upon the soil only in a state of solution; hence, the Winter rains and snows are invaluable in taking up the soluble, which are the valuable parts of manure, and washing them down into the soil. To derive full benefit from this, the ground must be, as before stated, light and porous, that it may act as a filter, retaining those elements important to vegetation. Ashes will be found a powerful auxiliary to the cultivator of flowers. The ashes of wood or leaves, contain a large portion of those elements useful to the life of plants, which they draw from the soil; and therefore, if we supply them to the soil a fuller and more luxuriant growth must be the consequence. Ashes also act mechanically, particularly upon sticky clay soils, by interposition: the cohesion is destroyed, and by that means water and air, Nature's most powerful agents, are admitted. The small fragments of charcoal contained in ashes are in no light degree conducive to the growth of plants.

Concentrated Manures.—The use of guano and other concentrated manures, I would advise to defer until the growing season, at which time they should be applied diluted with a large admixture of some other substance, or in water. Guano has a burning tendency, which, in a dry season, is sensibly felt by delicate flowers. On cold, wet land, and in experienced hands, it is undoubtedly of great utility, but I would recommend the novice to be chary in the use of it. Roses, and a few other plants that bear stimulating, thrive well under its application, provided other manures be available to the plant at the same time. A mixture of three parts pulverized charcoal or leaf mold, and one part guano, may generally be used with safety; but a better way of using guano is to apply a solution of it (1 lb. guano to 10 gallons of water) to growing plants a moderate watering once in a week or ten days. If the season be dry, do not use it so freely as in a wet one. For pot-culture, and particularly for forcing, guano is to be recommended, as the soil in pots is generally changed as often as once a year; and it is also easy to keep it moist. One ounce sulphate of ammonia dissolved in two gallons of water, and applied occasionally, will promote a healthy and vigorous growth of green stalks and leaves, but does not, I think, increase the number of flowers.

Plan and Arrangement.—It would be vain to give any directions for laying out a flower-garden, for in no one thing is greater diversity of good taste displayed, than in this very matter of flowers and their arrangement. If the preparation recommended, be made in the Fall, your plot will be ready for successful planting in the Spring. This bed, is the time for laying it out, in squares or parallelograms—circles or triangles—palm-leaf patterns or geometrical non-descripts—as your fancy dictates. I would only say to the novice, be your space great or small, do not cut it up too much. If you have little room, you have none to spare for unnecessary walks, and alleys; if your plot be large, you gain a much more beautiful effect from a continuous regular or irregular bed, than from the same space cut up into little patches. To place the taller growing plants in the back ground or center (oftener the former) is generally considered desirable; but the arrangement must of course be in a great measure determined by individual taste, the location of the flower-garden, and the points from which it is viewed.

FLOWERS GROWN FROM BULBS.

Hardy Bulbs.—The first Spring flowers that greet us, in these Northern latitudes, are the Snow-drop and Crocus, which come peering their pretty heads to us through the snow, or almost breaking their slender necks in desperate effort to force a way through the frozen ground. Next come Jonquils, the different kinds of Narcissus, and Hyacinths and Tulips, in their many varieties, making glad the month of May, and closely followed by the Crown Imperial and Iris. Then comes the stately train of Lilies, forming one of the chief ornaments of the garden until the first of September. All these should be planted in the Fall, in a rich compost, composed of one part well rotted cow-manure, one part sharp sand, one part leaf-mold, and one of good garden loam. Any bulb will thrive in this compost. Though not essential, a covering of leaves, two or three inches in depth, is highly advantageous, during the winter months, to all out-door bulbs, particularly those newly planted. A slight sprinkling of loose gravel, or a few old boards, will serve to keep the leaves from blowing away. *Crocuses* and *Snow-drops*, from their low growth, are particularly adapted for borders; or planted thickly upon a bank or slope, in full view from some favorite window, they have a charming effect, are perfectly hardy, and will flourish even in very exposed situations. The most satisfactory, though the most expensive way of procuring all flowering bulbs, is to order *named* varieties direct from the importers. You are more sure of getting good bulbs in this way, than in any other. Some of the best varieties of Crocus in cultivation are the Caroline, pure white; David Rizzio, purple; Cloth of Gold, yellow; Dickens, bright blue; and Prince Albert, deep rich maroon. The double sweet *Jonquils* are, I think, more desirable than the single ones. They are easily cultivated, and in favorable localities send up their fragrant canary colored blossoms as early as the middle of April. The Garden, and Polyanthus *Narcissus* afford early and fragrant flowers for bouquets and vases. No flower-garden should be without at least one or two sorts, for they proffer their bloom at a season when flowers are rare and difficult to obtain, and should be prized accordingly. Of the Polyanthus Narcissus the best varieties are, perhaps, the Double Roman, white and orange; Grand Primo, and Paper White, both clear white; and States General, lemon color deepening to orange in the center. Of the common Garden Narcissus, very superior varieties are the Double White, and the *Narcissus poeticus*, which latter is single and pure white, marked with red, commonly known as the Pheasant Eye. All the other varieties, of which I have any knowledge, are yellow, with not very strongly marked differences. The varieties here mentioned, with perhaps one or two yellow ones selected according to the fancy of the owner, will be enough for the amateur to commence with in any case for beginning. *The Hyacinth* comes next, which, with its numberless and peerless varieties, demands a chapter by itself. Probably the cultivation of no other bulb, if we except the Tulip, has been carried to such perfection as that of the Hyacinth. If you are willing to take a little extra pains in planting these bulbs, they will amply repay you by their luxuriant and gorgeous bloom. The following method, which I found a year or two ago in the Country Gentleman has been attended with unexpected success. "Mark out the space you intend to devote to Hyacinths, and excavate it to the depth of fifteen or sixteen inches; then throw in about two inches of small stones for drainage, and spread over them a thin layer of well-rotted cow-manure; fill up the bed with compost, raising it four or five inches above the surrounding level, to allow for settling. Hyacinths planted in a bed prepared in this manner, set six or eight inches apart and four inches deep, and protected with leaves or straw, can not fail to do well. The immense number of these valuable bulbs now in cultivation, renders it impossible to select a few which would claim pre-eminence over all the rest. The limits of the present article forbid the mention of more than a very few favorites: The Couronne Blanche, white; Herman Lange, rose-tinted; Bride of Lammermoor, dark blue; Globe Terrestre, light blue and white; La Garland, crimson; and Princess Esterhazy, yellow; these are all very beautiful, but not more so than a hundred others I might name.

Tulips.—Much of the gay bloom of the garden, early in the season, is dependent upon Tulips. The great rage for these flowers, which prevailed so extensively a few years ago, has very much abated—a fact which, fortunately, can not detract from the innate beauty and richness of the blossoms which the bulbs continue to send forth every Spring, notwithstanding the comparative obscurity to which they are consigned. Tulips require to be planted with great regularity; if this precaution be neglected, the beds will present a ragged, slovenly appearance, far from pleasing. Plant them, therefore, in straight lines, about six inches apart and with the taller kinds in the center. Of course the hight depends somewhat upon the strength of individual bulbs, as well as upon the particular variety which they represent. Double Tulips are not so desirable as the single: they are coarse, with thick, muddy coloring. The striped Mariage de ma Fille forms a bright exception to this rule. Among the best single varieties, are the Silver Sceptre, pure white; Monument, white ground, marked with cherry; Abbesse de St. Denis, lemon with delicate crimson lines; Beauté Supreme, purple; and La Matelas, deep rose. The Florist Tulips are taller and of later bloom than the foregoing, and are highly valued. Rose Bybloemens and Violet B., white grounds flaked with rose, purple or crimson, combine most of the attractions to be found in this class. The collection will not be complete without a few of the picturesque Parrot Tulips, with their curious intermixtures of green, yellow and crimson. The Markgraf, yellow and green, and the Perfecta, scarlet, yellow and green, are preferable to any others within my ken.

The Crown Imperial (Frittelaria Imperialis) is a fine showy plant, sending up shoots two or three feet high, which bear wreath like clusters, of showy lily-like flowers, which emit an unpleasant odor, and are therefore not desirable except in a large collection. It is suited to any good light garden soil.

Iris.—The different varieties of bulbous Iris (Flower de Luce) form a very attractive class of plants. Most of them are of different shades of blue, though some are pure white, and others bright yellow. *Iris Persica* is a desirable blue variety, being fragrant and early. *Iris pavonia*, white spotted with blue, is also to be recommended. After the time of blooming is past, the bulbs should be taken up and dried, and replanted in the Fall, as they are apt to rot if left in the ground.

Lilies.—Next in order come the lilies—the fairest and proudest ornaments of the garden. The double white garden lily is earlier than any other, blooming in May or early in June. Next comes *Lilium bulbiferum*, enlivening the month of June with its bright orange tints, and closely followed by the white lily, *L. candidum*, cultivated in every garden, and decidedly common, yet always presenting, in its fair stately beauty, a claim to a place in even the most limited collections. *L. Longiflorum*, also bears snow-white flowers, very fragrant and delicate, on stems about a foot in hight, a week or two later. The superb Japan Lilies, which have only recently been cultivated to any extent in this country, but which are fast becoming indispensable to every amateur, display their bloom in August and September. Some of the new seedlings are as yet quite expensive, but the varieties first introduced—*L. lancifolium album*, pure white; *L. lancifolium rubrum*, white, spotted with crimson; and *L. lancifolium punctatum*, white, spotted with pink—are within the reach of all, and have beauty enough to satisfy ordinary mortals. Those desiring the newer and more expensive bulbs, will find—in the "Meipemone," dark crimson; "Ursulia," deep pink with dots of a yet darker shade; and "Terpsichore," dotted white—ample return for the additional outlay.

All the above (except Tulips) thrive vigorously in the compost recommended for Hyacinths. The subject of bulbs is far from exhausted, but the limits of the present article make it necessary to pass by some varieties well worthy of cultivation. By a judicious arrangement of those already mentioned, however, and by planting in connection with them tender bulbs, set in the Spring, it is easy to secure a succession of bloom from April to October; and a bed of flowers gives more abundant reward for painstaking cultivation. All bulbous plants should be watered with liquid cow-manure while in bud.

FLOWERING SHRUBS, ETC.

No collection, however small, can afford to be with out at least one or two of the many easily grown flowering shrubs with which Europe and Asia are the larger kinds are hardly suitable for the flower-garden proper, but there are many whose dimensions make them quite admissable. There is the *Spirea* family, of which the most beautiful is indisputably the peerless *Spirea Reevesii flore pleno*, brought several years ago from Japan, by Mr. Reeves. It is quite hardy, only in rare instances showing any bad effect from the most intense cold of this latitude, (4° 30′); and in June, when the slender branches are covered with thick clusters of tiny flowers of the purest white, it forms one of the principal attractions of the garden. In choice and elegant beauty nothing can excel it. The Chinese Flowering Plum (*Prunus Sinensis alba flore pleno*) of yet later introduction, has, I believe, been fully tested in its ability to endure our winters. It bears a profusion of pure white flowers in June, and is, in growth and habit, much like the old double flowering Almond, except that it is rather more hardy. It was brought to this country in 1857, and is easily propagated by layers or cuttings which will bloom the following season, though the full growth of the plant—about three feet—is attained for several years. *Deutzia gracilis* is a yet more diminutive shrub, bearing clusters of bell-like flowers of the most exquisite purity. It is generally considered hardy, though I have known it to be winter killed in exposed situations. *Deutzia scabra*, which is taller and bears larger flowers, is more tender and never survives one of our winters without protection. Both varieties are well worthy of cultivation. No amateur should be without one or more of the varieties of *Tamarisk*. Its delicate foliage and fine clustering purple flowers are alike beautiful. It thrives better if tied up with straw or evergreens during the winter months, but even if this precaution be neglected, and the top killed, the roots always send up new shoots in the Spring, which bear flowers the same year. The best variety (*Tamarix centralis*) blooms in August and should in every collection however small. *T. Africana* is a plant almost precisely similar in appearance, but blooms in May. The *Weigelia Sinensis* and *W. Coraensis* are comparatively new; the former is perfectly hardy and in June bears a profusion of beautiful pink flowers without fragrance; the latter is a little tender, but amply repays the slight additional care it requires, by its two abundant offerings of pink satin-like blossoms, one in June, and the other in August, or early in September. The different varieties of Japan Quince (*Cydonia Japonica*), white, blue, pink and brilliant scarlet are among the earliest blooming shrubs, the scarlet being particularly valuable at a season when gay flowers are comparatively rare. All the above thrive in any light rich garden soil, with a good supply of sun and air. Many more plants of this class thrust their pretty faces before me while I write, but my rapidly decreasing space warns me to pass on to the next division. I will, however, linger to mention the *Rhododendron Catawbiense*. When placed where it is sheltered from North winds and partially shaded, in a good peaty soil, nothing can

exceed it in attractiveness. Its dark glossy evergreen leaves, which challenge admiration every month in the year, are in June crowned with panicles of the most exquisite bloom—full, firm flowers of a blush white, tinged and shaded with delicate pink like an apple-blossom. By all means have a Rhododendron. You may gradually add to your collection, as they come under your notice, some of the many shrubs having equal claims with those recommended, but the mention of which I must omit.

HERBACEOUS PERENNIALS, ETC.

Many of the old herbaceous perennials have coarse muddy flowers which it is hardly worth while to cultivate, now that we have so many new and beautiful varieties at our command. At the same time, many of the older kinds must always be admired for their intrinsic beauty, however foolishly passed by and forgotten in the rage for novelties. Among the herbaceous Spireas, those commonly known as the King and Queen of the Meadow (*Spiræa ariæfolia*, and *S. lobata*) are abundantly worthy of attention. They send up yearly a strong, almost woody stem growth, bearing light graceful plumes of pink or white flowers, are in full glory in July, and their long duration of bloom gives them a double claim to our notice. Their foliage is also very desirable for cutting, and may, at a little distance, an effect much like that of geranium leaves. *S. Japonica* is a plant of smaller, more delicate growth bearing a fine white flower very desirable for cutting. *Alyssum saxatile* is a low growing hardy plant, which sends up a profusion of bright yellow blossoms in May or early in June. As its time of blooming is so early, it is better to plant the seeds in the Fall, in order to secure a good supply of flowers. It may be transplanted with great care, but it is better to plant it where it is intended to remain; always remembering, in the case of all seedlings, to thin out the young plants as soon as they are an inch high, that they may not be cramped by crowding. The same rules for treatment will apply to the different varieties of *Lychnis*, Columbine, *Rudbeckia*, *Campanula*, and almost all seedling perennials.

Dicentra Spectabilis is a native of Japan, introduced here within a few years. It has a tuberous root, sending up slender drooping stems in June and July, hung with curiously beautiful crimson flowers, relieved by two little protruding white wings, which add much to its grace and beauty. Like all perennials, it will take care of itself when once established, only requiring to be lifted and divided from the crown once in two or three years. As after its time of blooming is over, the leaves and stems turn yellow and die, it is well to plant some tall growing annuals in such a position as to hide it from the principal points of view after the first of July.

The Day Lily (Hemerocallis), as its name indicates, lives all its short life in one day, but as each stem bears a succession of flowers, this is not an objection. The blossom is exceedingly delicate and beautiful, and is never more attractive than when it first opens its fragrant cup in the soft mist of an August morning. There are three varieties in cultivation: *H. Japonica*, pure white, *H. Cerulea*, blue, and *H. flava*, lemon color. The last is less generally known, though by no means less beautiful than the others. As this plant is rather delicate, a covering of leaves or straw is necessary for the winter months.

Yucca.—There are several varieties of the Yucca, most of which are quite tender—some even requiring the warmth of a green-house. *Y. filamentosa*, is, however, one of the hardiest plants in cultivation. No amount of exposure can kill it. The root is strong and tuberous, and the foliage, which is not particularly graceful, is evergreen. Tall stems, tasseled with a profusion of white bell-shaped flowers, shoot up from the root in July.

The *Mexican Heliotrope* is a perfectly hardy plant, easily raised from seed, and bears long branching stems of pendulous blue flowers in August. It has a peculiar delicacy of growth, which makes it very attractive. [We do not know the "Mexican Heliotrope;" the common Heliotrope turns black after a slight touch of frost.—*Ed.*]

The *Forget-me-not* (Myosotis palustris) should, by all means, have a corner devoted to it. The plant is covered in June and July with a profusion of exquisite little clusters of flowers, which are either blue of different shades or white with a yellow eye. The best varieties are: *Myosotis alpestris*, blue; *M. alba*, white, and *M. azurea major*, deep blue, and large. They are easily raised from seed, and if started early will bloom the first season. The plants do better if removed to a new place every year or two.

Pinks.—Of all the varities of *Dianthus* none can equal the superb *D. Laciniatus* (or Heddewig's pink) introduced by Mr. Heddewig from Japan. It is perfectly hardy, though many persons imagine that it is not. [Ours died after blooming and perfecting seed.—*Ed.*] A slight protection through the winter months can do no harm, but, that the plants will thrive and bear a profusion of flowers without it has been abundantly proved. Authorities differ as to their powers of duration; some maintaining that they are perennial, while others class them with biennials. As my own plants will not be two years old until Spring I can not speak positively on this point. The young seedlings will, if planted very early in a hot-bed, bear flowers the first year, and the second, you may look for them in luxuriant abundance. The blooms are three inches in diameter, single or semi-double, and of various colors—some deep maroon crimson, some beautifully striped and marbled, and others pure white. They should be in every collection. A few of the varieties of *Caprationa* and *Picotees* are also quite indispensable. Though only half hardy, they may be successfully cultivated in the garden with slight winter protection. They may be raised from seed, but the seedlings are so uncertain, often bearing small single flowers, it is better to buy plants or cuttings of named varieties. All plants of this class require shade and moisture. Sweet William (*Dianthus barbatus*), is a biennial, the finer kinds of which are always desirable. *Antirrhinum* or Snapdragon is another biennial which no garden should be without. Of the named varieties the finest is *A. speciosum*, pure white and crimson. The best way of raising them, however, is to plant a paper of mixed seeds. If the young growth is made in a hot-bed, flowers will be abundant the first season. A covering of straw or leaves is advantageous for the winter. The same treatment is suited to *Ipomopsis elegans*, a biennial bearing delicate foliage and clusters of bright scarlet blossoms on the end of the stem. *Pentstemon* though often classed as perennials, seldom live over the second year. The varieties in cultivation are very numerous. They require an exceedingly rich soil, and shade and moisture are essential. An occasional watering with guano water when the plants begin to grow the second Spring, will make large and abundant flowers. The Pansy bed should be strewed with stable litter during the cold weather.

ANNUALS.

It would require a separate article to enumerate and describe, even partially, the hundreds of flowers of this class, which fill so important a place in the months of July and August, after the bloom of perennials has passed by. It will be sufficient for the present purpose to divide them into two classes, *hardy* and *tender*. The hardy kinds may be sown in the open ground in Spring, or even in the Fall; while the more tender ones must either have the aid of a hot-bed to bring them forward, or must be sown so late as to render their time of flowering extremely short. Among all the kinds introduced within a few years, there is none more valuable than the *Double Zinnia*, a native of the East Indies, and cultivated here as a tender annual. Plant the seeds in a hot-bed about the first of April, and remove the young plants to the border the latter part of May, and, when a few inches apart. As soon as the blossoms appear, a portion of them will prove to be single, and as these are generally worthless, the sooner the plants bearing them are uprooted the better. Those left will fill up the vacant spaces, as when their full growth is attained, they are from two to three feet high, and their long spreading branches make a diameter of from twelve to eighteen inches. In a light rich soil, they bear a succession of flowers till frost, and make a very pretty, though of course very slight, temporary hedge. The flowers are beautifully of a fine deep rose-color, very double and regular, looking, at a little distance, like small evenly developed roses.

Among the smaller annuals, *Alyssum maritimum* (white) receives a good share of favor. It grows near the ground, and is a very free and constant blooomer—two peculiarities which make it desirable for edging and small masses. Somewhat similar, though larger and bearing finer flowers, is Candytuft (*Iberis*). *I. amara*, white, and *I. speciosa*, deep purple, are the best varieties. They are quite hardy. The Tassel-flower or *Cacalia* bears an exceedingly delicate and pretty blossom. It does tolerably well planted in the open ground, but if small plants are raised in a hot-bed early in the season, and transplanted to any sunny spot in the garden, an early and continuous bloom will be secured. The seeds mature very rapidly, and by the time the plants of the first set have passed their prime, new ones, self-sown, will be ready to bloom. After the old plants have borne their last blossom, they should be removed. The foliage grows in a thick cluster close to the ground, from the center of which a slender waving stem shoots up, bearing delicate tassel-like blossoms. *C. coccinea*, red, and *C. sonchifolia* (or *aurea*), yellow, are the only varieties of which I have any knowledge.

The *Schizanthus* is an exceedingly beautiful annual, not by any means as extensively known or cultivated as it deserves. The flowers are of various colors, delicately veined and spotted, and nestle in a foliage correspondingly beautiful. *S. Hookerii*, crimson and yellow; *S. albus*, white and crimson, and *S. gracilis*, are the best varieties. It is a little tender, but may be successfully grown without artificial aid, if planted in a warm, sunny spot. It looks well grown in masses. *Euphorbia variegata* bears a little white flower, insignificant in itself, but from the manner of its growth, and the peculiar green and white foliage with which it is surrounded, it is prized by all lovers of flowers. The seeds should be planted several inches apart, as they send up strong fleshy growing plants about eighteen inches high, which are showy without being coarse, and not only an ornament to the garden, but very valuable for cutting. Its arrange with other flowers of more decided coloring. An annual quite indispensable to every collection, large or small, is *Eschscholtzia crocea*. It is a native of California but has proved perfectly hardy here. From May until hard frost, it is crowded with brilliant yellow blossoms, which look like so many butterflies. The foliage is beautifully light and airy. The seeds sow themselves in the Fall, and a mass once established will need no further attention except thinning out the young plants when they come up too thickly in the Spring. *E. alba* is a part of precisely similar appearance and habit, except that the flowers are white. Its long tap root renders it difficult to transplant. A few green-house plants such as *Ageratum*, *Stevia*, *Mimulus* and *Gillyflower* may be successfully raised as tender annuals.

BEDDING PLANTS.

Among the numerous bedding plants which make the garden gay during the later Summer months the *Verbena* presents the first claim to attention. It is too well known to require any description. Some of the finest varieties are: Lady in White, pure white; Defiance and Mrs. Woodworth, bright scarlet; Lord Raglan, pink with white eye; Lady Palmerston, purple with white eye, and Sir J. Paxton, crimson. They thrive best in a light sandy soil, and exposed to a hot sun. *Geraniums*, from their constant and brilliant bloom, are highly ornamental. The old Rose has the best foliage. Of scarlet Geraniums, Punch and Tom Thumb are indisputably the best; and in the same family, Luceda Rosea, bright pink, and Mary Weld, salmon color, are both desirable. No fancy geraniums are more valuable for bedding than Perfection and Pretty Polly. *Heliotropes*, too, fill an important place from July to September. Lady Helen Mar and Splendidum, both dark and free bloomers, are excellent varieties. For light flowers, nothing is better than the old Peruvian. *Salvia* or *Flowering Sage*, is exceedingly ornamental in the garden, sending up brilliant spikes of flowers in August. *S. coccinea*, intense scarlet, and *S. amabalis*, blue, are the best varieties.

Some moist sheltered spot must be given to the *Fuchsia*, an exceedingly beautiful and graceful flower, with innumerable varieties. The most perfect specimen of all is the *F. speciosa*, dark blue and red. The Hero, which bears lighter colored flowers, is also a fast grower and very free bloomer. The Empress, white and rose, the Venus de Medicis, pink, the Climax, deep red and purple, are also fine, and have that cool limpid coloring, absolutely refreshing to behold, which belongs exclusively to flowers grown in the shade. *Cupheas*, *Bouvardias*, *Lantanas*, *Coral Plants*, and many others, bloom abundantly in the open ground. The tender, summer-flowering bulbs give us a most gorgeous array of blossoms late in the season. Among these the *Gladiolus* stands pre-eminent, as its tall stems hold up the inimitable flowers to the sun. The Hector, bright rose, the Mad. Leseble, white, the Joan d'Arc, bright purple, the Adonis, cherry color, are among the best. These flowers have a proud magnificent beauty, and never fail to elicit admiration. *Amarillis Formosissima* gives us large superb lilies in July or August, on stems about ten inches high. The flowers are a rich velvety crimson, spotted with gold. *Tigridia pavonia* bears very showy and beautiful flowers of a somewhat similar character, but without the spots. The *Tuberose* bears tall spikes of creamy white flowers, which are deliciously fragrant. The first growth must be made under glass, and it is quite useless to preserve the bulbs for a second season, as our sun is not hot enough to ripen them fully. A few bulbs may be reserved, and planted a week or two after the first set, for a succession of bloom.

There are numerous *climbing plants*, all worthy of attention. Roses in endless variety—Dahlias by hundreds, and Chrysanthemums by the score—but each one of these demands a separate article. Any one, however, who will plant all the varieties of flowers herein enumerated, or who will select a few from each division, and add a half dozen Roses, may secure a succession of choice and beautiful flowers from the time the Spring snows melt away, until winter winds make sharp suggestions of some other employment than gardening. It is wiser to have some personal knowledge of a plant before setting it in your own garden. If possible, know something of each one before you admit it to your collection; then give it a reasonable amount of careful culture, and success will not fail to crown your efforts. [But when not practicable to first study the flowers on the grounds of others, your own garden will furnish the school.—*Ed.*]

A Few Convenient Garden Tools.

An old gardener always uses fewer and simpler tools, and does better work, than the novice. We will describe a few of the best, indeed about all that are essential for common operations. A small outlay will purchase the whole of them, and the facility they give to garden work, will pay a very large interest on the cost. Let it be remembered, that a good implement, however high the price, is in the end cheaper than a poor one costing not a fourth as much. Light, well made garden tools, of cast steel, or spring steel, or of iron edged with steel, are always to be preferred to those made wholly of iron. The former do not bend or batter, or break so easily; they cost a little more, but last much longer, do not rust readily, keep sharper, and are lighter and handier in every respect.

THE SPADE is necessary to dig holes, drains, etc., to cut turf, to move small quantities of earth in making beds, etc., to divide masses of shrubs or other plants, to take up trees, and the like, but it no longer holds the place of honor.

THE SPADING FORK, (fig. 1,) is the usurper. This is *the* implement for working the soil. It penetrates the ground with greater ease, and lifts as much soil as the spade, leaving it light and crumbly, not in soggy lumps. We prefer a five tined fork, the tines bevel-backed, of the best steel, and gradually and very slightly increasing in width from the tread to the points, so as to prevent stones from catching between them. For moving loose earth, sand, compost, etc., a *shovel* is indispensable, except in very small gardens. So also is a common field *hoe*.

Fig. 1.

THE REEL AND LINE, (fig. 2,) of the form shown in our cut, is most convenient, but any cord wound upon a pointed stake, with another short stake attached to the end, will answer the purpose well. A strong cord of good size is preferable to a string. It should be strong enough to bear a hard pull. The garden line serves a more important purpose in giving a garden that symmetry and regularity which marks a well kept place, than any other implement. A long line made so strong as to bear stretching, yet so small in diameter as not to be swayed by the wind, is preferable. It should be housed at night away from dews.

Fig. 2.

THE EDGING KNIFE, (fig 3.) Good grass sods are far preferable to the box plant as edgings for beds. The former, neatly cut and laid, and kept closely trimmed, are neater, more pleasing to the eye, and can be more readily "mended," than the box which often winter kills or fades in spots, and requires a year or two to acquire a respectable size. The grass edging can be in perfection in a month or two. To clip and trim the edges of the sod border, a half-moon shaped blade, with a handle like a spade, is convenient, but not indispensable; a sharpened spade is a good substitute.

Fig. 3.

A STEEL-TOOTHED RAKE, the head and teeth being all spring steel, and in one piece, 8 to 12 inches wide, with the teeth long and well annealed so as not to bend easily, is essential for nice working of the soil, for pulverizing it, for mingling compost with the surface, and for dressing ground walks, removing stones, lumps, etc.

A GRASS RAKE (fig. 4,) is one of the most convenient tools we have used. It is simply a hay rake, with at least twice as many teeth as the common hay rake. The teeth are shorter, and of course closer together. This gathers up the clippings of the grass plot or lawn very clean. We do not make hay in the garden, and the grass never should be more than 4 inches high. All that this rake will not gather, is best left on the sward as a mulch for the roots; it will not show, perceptibly.

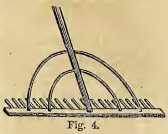


Fig. 4.

THE SHUFFLE HOE, (fig. 5,) often wrongly called "scuffle hoe," is a very convenient implement for working among plants. If provided with a long handle, it saves the back from many an ache, and some wear of fingers. The blade should have both edges sharp, and then in *shuffling* it backward and forward, it cuts both ways, severing the weeds, and leaving them on the surface, and lightening the soil. We advise its general adoption.

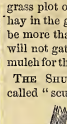


Fig. 5.

DIBBLES, (fig. 6,) of which we present two kinds, are simply round pointed pieces of wood or iron for making holes in which to set out plants or cuttings rapidly. But we do not advise their use in general, for though convenient, a much better hole is made with a trowel or flat stick, inserted and pressed to one side; the soil is not then compressed on all sides. Still the dibbles are very convenient in rapid work, and in the field. The spur on the long one regulates the depth to which it may be thrust.

Fig. 6.

THE GARDEN TROWEL, (fig. 7,) is very convenient for lifting and transplanting, digging holes, etc. It is like a common small mortar trowel, with the sides curved upwards a little. Our American made garden trowels are less curved than the English manufactured ones, which form nearly or quite half a cylinder; the former are preferable, as they do not cling to the soil, while they answer all purposes.

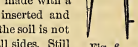


Fig. 7.

A KNIFE-BLADE TROWEL or weeder, (fig. 8,) was recently shown to us by Mr. Theodore Holt, a gardener of this city, now a missionary horticulturist at Port Royal, S. C. It consists of a blade of steel, an inch and a half wide, and 6½ inches long, tapering with a gradual curve to a point, the shank raised at right angles to the blade, which is sharp at both edges, and nearly flat on the upper side. The use of the implement is in weeding, and thinning out all kinds of vegetables and other plants sowed in rows, and one a little familiar with it, does this tedious work with ease and rapidity.

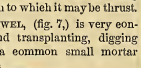


Fig. 8.

THE SPUD, (fig. 9,) is a stout chisel upon the end of a cane. It should be in the gardener's or master's hand whenever he walks through his grounds; and wherever a weed of any considerable size shows itself, the spud should seek out its root, deep down under the sod or spreading close to the surface, and cutting it off, leave the plant to wither where it stood, or to be easily pulled up. This is good for thistles.

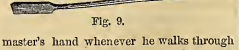


Fig. 9.

THE WEEDING FORK, (fig. 10,) is a little implement, which we have taken great satisfaction in using of late years. It is the spading fork on a one-hand scale. Penetrating the soil about four inches, it loosens it thoroughly near the roots of plants, and in places where the spading fork can not be used. At the same time it greatly facilitates the uprooting of weeds. For working strawberry beds it is a most excellent implement.

Fig. 10.

BAYONET OR ONION HOE, (fig. 11.) This is a sharp-pointed, double edged steel implement, about 8 inches long and 1¼ inches wide at the broadest part, tapering down to a point. It is set like a common hoe, upon a handle 4 or 4½ feet long. We use it *more than any other garden implement*. The point turned to either side, is convenient for working among all kinds of plants, and for digging drills, loosening up the ground, etc. The long edge answers the purpose of the common hoe for cutting weeds, loosening the soil without heaping it up, etc. Mr. Holt's trowel, (fig. 8,) with the shank curved so as to bring the middle of the blade in front of a long handle, and three inches distant, would be still better than the bayonet hoe, we think.

Fig. 11.

Earliness of Grapes.

At a meeting of Fruit Growers in Rochester, last Fall, Mr. Barry spoke of the Rebecca grape as "a high flavored grape, as good as a fine Muscat." Mr. Hoag regarded it as "a very superior grape," etc., etc. We agree with these gentlemen, thus far; but when they speak of it as ripening much earlier than the Diana, we can not accord with them. In our experience, it is *eatable* a little earlier, but it does not get its juices matured and perfected so as to be really ripe and delicious until the Diana is fit to be gathered into the same basket. The longer it hangs upon the vine without exposure to hard frosts, the better. Two baskets of them lie on our table now as we write, (Jan. 10th,); those cut early, have a green, watery look, as if imperfectly ripened; those cut later, have a golden, semi-transparent, sunny aspect, and they are much sweeter than the others.—There are several new grapes, of which we hoped to hear more last Fall, and among them the *Cuyahoga* and *Crevelling*. (The Crevelling is called by some "Catawissa," by others "Bloom.") So far as we have heard, little new testimony has been given to their excellence. Those who advertise these and other novelties, should have brought the fruit before our various Pomological Societies and Fairs, last Fall, and obtained their impartial opinions. If the propagators can not get a favorable verdict for their fruit from such sources, the probability is that it is not worthy of public notice. If they can, this favorable judgment will be worth a hundred fold more to the vender than the most flaming advertisements or the loud puffings of interested persons. We suspect, however, that the two grapes above mentioned are worthy of all the commendation that has been bestowed on them. They are both superior to the Hartford Prolific and Con-

cord, and they ripen earlier than the Isabella.

The *Adirondac* grape, which hails from Plattsburg, is said to ripen a fortnight before the Isabella, and to be of first-rate quality. Its ripening last Fall at Plattsburgh, and its exhibition at Montreal in the month of October, is good evidence of its early maturity. If it will ripen at Plattsburg, before hard frost, it will ripen any where in the United States. Its *earliness* being proved, now give us good proofs of its *quality*.

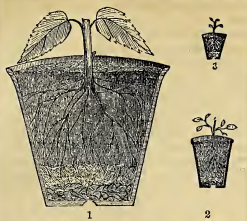
Some time last Fall, Mr. Thomas, of the Country Gentleman, writing from Ohio, mentioned visiting a *Seedling Isabella*, which was fully equal in flavor, size, etc., to its parent, and two weeks earlier. If these facts prove to be *facts*, the public will want to hear more about that grape. For, let men say what they will about the Delaware, Concord and the other new comers, we pray take not away from us the old Isabella where it can be ripened. And if this seedling is fully equal to it, and ripens a fortnight earlier, it will be hailed with delight.

How to Treat Dwarf Pears.

I have them fifteen years old in my garden, thrifty, hardy, productive, and bidding as fair to live the next fifty years, as any standard tree upon my grounds. The complaint against these pets of the garden, I am fully persuaded, is owing more to neglect, and mismanagement, than to any inherent difficulty. Some varieties will not flourish on the quince stock. The fruit books will point them out. Do not plant such. They will not be productive on grass ground, or in hard inflexible soil. Do not plant them there. They want a deep, rich, mellow border, at least eighteen inches in depth. If you can not afford to prepare a border, do not purchase dwarf pear trees. In addition to being properly planted, they must have care every season. Now they should be shortened in, about two-thirds of the last season's growth. This keeps them stocky, and prepares them to sustain a great burden of fruit. They also want a barrow full of stable manure put around them every Fall. The quince roots can not go far in search of food. They should have all they can take up within six or eight feet of the tree. With manure and good management dwarf pears will be a success. C.

Plant an Apple Orchard.

The old ones are fast dying out all through the older States. They were planted a hundred years ago, or more, have done good service, and ought to have their day. When apples are $3 a barrel and upward, there is not an adequate supply in the country. They can be grown at a dollar a barrel, with profit. The apple crop in a single small county in this State, was worth half a million of dollars last year. Other counties, in the older parts of the Eastern States, were under the necessity of paying out a hundred thousand dollars for this fruit, because they had not the article at home. Peaches and plums we may be able to get along without, but apples we must have—for sauce, for pies, for the dessert, and for the dinner basket of little boys and girls who can not come home from school to dine. We say then to every farmer, plant an orchard of at least a hundred trees. The trees are all ready for you in the nursery, well grown, and grafted, two and three years from the bud. Get thrifty trees, of varieties that you know will flourish in *your* locality, and in four years you will be eating fruit from them. Do not fail to plant an orchard this very month.



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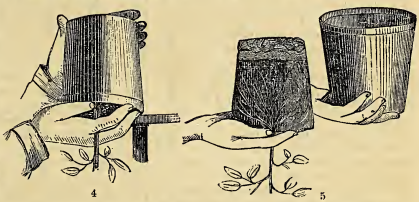
Earthern Pots for Plants—Very Useful for Everybody

Comparatively few persons, except those who have green-houses, have yet learned the decided advantage there is in having an assortment of earthern-ware pots about the garden. They cost but a trifle—only about a dollar for a hundred of the smallest size, and from that up to five or six dollars per hundred for the largest size needed in ordinary gardens; and they will generally pay for themselves the first year, while they will last many years if used with moderate care. Take, for example, the operations in a common vegetable-garden on the farm, or in the village lot. We must wait until the ground is dry and warm, before the work of preparation, and seed sowing can begin, and the Summer is half gone before the table is supplied with anything more than a little lettuce, a few radishes, and, perhaps, some early peas. Asparagus and pie-plant, where these are grown, about complete the assortment. But by simply providing a few pots, the lettuce can be had *much earlier*, so can the melons, the onions, the cabbage and tomato plants, the cucumbers, the squashes, and a dozen other things, and with more certainty, and but little more labor.



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The flower garden, too, may be a bloom of beauty and a source of pleasure, many more weeks. Having on hand the flower pot, or plant pots, as we may call them, we can sow our seeds a month or more in advance, and have the plants all in vigorous growth by the time the ground is warm and ready to receive them. Ten, twenty, fifty, or a hundred pots of earth may be sown with seeds at an early date, and be set on the sunny side of the house or barn, or of a board fence, during the day, and over night also, except when the chilly air betokens a frost. They can then be readily set into the barn, or into the cellar if very cold, or they may be covered with blankets, carpets, mats, or hay, or straw. A hundred 5-inch pots will scarcely require a space five feet square. After the seed is sown, an occasional watering is required—using water with the chill taken off, putting it on moderately—not in a flood—with a common sprinkler. The pots may be filled with earth and the seeds sown under cover on rainy days, if a mass of soil has been previously prepared and placed under cover. (For description of best soils, and best kinds of pots, see the *March American Agriculturist*, page 71.) If one has plenty of small pots, a seed or two may be sown in each, and one plant only be allowed to grow. At the proper time the soil can be slipped out in a moment and set into the ground; the plant will grow right on, and be in a bearing condition, when perhaps the seed sown in the open soil is just beginning to start up, if perchance it has not been rotted by a long cold rain. An hour's labor upon the pots will provide two or three dozen cucumber or squash plants, which when planted out will start off ahead of all the noxious insects. It is usually preferable, however, to sow more seed in larger pots and after the plants are grown so as to begin to crowd, transplant them into smaller pots, one or two in each. Four, six, eight, or more small plants, like cabbages, may be left in each pot of larger size, and the soil be divided when putting out; but we prefer smaller pots with one plant in each, at the time of the final transplanting. There is then no breaking or disturbing of the roots in the removal.

Figs. 1, 2, 3, are *sections* of different sized pots filled and with plants growing. In the bottom are pieces of broken pots, or bricks, stone chips, or oyster shells, to afford free drainage off through the hole in the bottom, for any surplus water. It is important to have only so much moisture as will be naturally retained by the soil. Above the bottom layer is half an inch or so of moss to sustain the earth. Thin sods, or fine shavings may be used, in the absence of moss. The drainage and moss will occupy one-fifth to one-fourth of the pot (it is shown too thick in the engravings,) and the soil be filled in to within half an inch or less of the top.

Figures 4 and 5, show the mode of taking out the plants. Place the hand upon the soil (fig. 4) with the stem between the fingers, invert the pot, and strike its edge gently upon the corner of a table, block, or other wood. The mass will slip out as seen in fig. 5. After a little practice it will be a pleasure to often take out the soil and examine its condition, its dryness or wetness, and the growth of the roots. If these have filled up the soil, and appear crowded, before the open ground is ready, transfer them to larger pots (called "repotting.") Indeed most plants are benefited by one, two or three transfers; they grow more stocky above and in the soil, and a stronger mass of roots is secured. To repot, take a pot one or two sizes larger; put in the drainage and moss, and enough soil to raise the inserted ball of earth nearly to the top. Remove the bits of crockery from the bottom, and loosen the roots a little if in a compact mass; set the ball in and sprinkle in loose earth around the outside, packing it down gently with the fingers; water moderately, and set aside. The roots will soon spread out into the larger space, and be ready for a still larger pot, or for planting out. The whole process is simple, and easily performed after a little experience, and will afford real pleasure. Take our advice, and order

a few pots this season to begin with, from the nearest pottery, or seed-store, or agricultural warehouse. We also advise the pottery men, and seed and implement dealers, to provide an ample supply by another season, if not this, for we hope to have tens of thousands in use in the *Agriculturist* gardens all over the country.

The Tuberose—Very Desirable.

On few flowers has nature lavished more attractions than upon the Tuberose (*Polyanthes tuberosa*). Graceful and beautiful, whether we regard the full clustered spike or the individual flowers, of a delicate, rich blush, or nearly white, it diffuses far and wide a fragrance not less delicious than powerful, and not in the least cloying. As its name indicates it is a tuberous plant. It is a native of Ceylon, and requires a long season. The time is at hand for planting the tubers, and most important is it to secure good roots. They are annually imported by our seedsmen, and are besides grown in large quantities by florists in the vicinity of New-York, and other cities further South. A good bulb is large, plump and firm, with very few offsets; one or two small offsets are not objectionable, as they help to furnish foliage; but bulbs with any considerable number should be rejected, as the chances are that the main bulbs bloomed the previous season, and will not again, as the bulb never blooms but once. Plant them in rich and moderately dry soil, about one foot apart, covering the top of the bulb about one inch. So soon as the flower stalks appear, set by each a strong stake, four feet long (one foot in the ground,) to which tie the brittle stalk as often as necessary to keep it from being broken. Where the seasons are not long enough to allow the plant to perfect all its flowers or bulbs, about last of March or first of April put single bulbs into four inch pots, in soil composed of equal parts of loam, sand, and rotten manure. Give but little water and place in some warm part of a room or under the stage of a green house until they form roots, which will usually be in about two weeks. They should then be placed where they will be fully exposed to the light, in a temperature not lower than 55° or 60°; when the weather is warm and settled they may be turned out into the open ground, being careful not to break the ball of earth around their roots. They bloom in August and September.

So soon as frost kills the leaves in the Fall take up the roots and spread them out in the sun to dry, covering them at night, or bring them indoors to avoid wet or frost. When they are so dry that all the soil will readily separate from the tubers, remove those that have not bloomed, put them aside for blooming plants next season, and keep the others to propagate from. The leaves and roots should then be cut off and the bulbs put away in the *dryest* place possible—if where the temperature will be from 60° to 80° through the Winter, so much the better. Tubers that have bloomed should have their largest offsets taken off the next season and planted to make blooming bulbs for the succeeding year, while the old bulbs are planted to produce more offsets.

THE HOUSEHOLD.

Drying Woolen Stockings.

All housekeepers know how difficult it is to wash and dry woolen hose without having them shrink. The strong feet of adults can overcome the shrinkage, but for the tender feet of children and infants the difficulty is a serious one. It can be easily avoided, however, by a simple method, which may not be known to all the readers of this department of the *American Agriculturist*. When the stockings are new, lay them flat upon a piece of paste-board, mark out the form with a pencil, and then cut the board pattern fully as large as marked. When the stockings are washed and ready for drying, put one of these patterns into each, pinning them over the top, and they will remain of the original size after being dried. The sides of glove or ribbon boxes, or other paper boxes, make good dryers. We happened in at a house the other day, where there were about half a score of children, old and young, and the rows of some thirty stockings on stretchers, set up to dry, was a pleasant sight, and suggestive—they suggested this paragraph. One thing more. In the case alluded to, the "good man of the house" had provided neat wooden stretchers, apparently whittled out of shingles with a jack-knife, on some winter evening. (He doubtless deserved to have such a fine group of children—they appeared to be well-behaved ones.) We indulged our fancy in imagining how the stockings for the tiny feet, then in the cradle, would successively occupy a place on the different sized stretchers that stood in that long row, the bottoms ranging from two or three inches in length, to a full grown *foot*.

Contributed to the American Agriculturist.

Substitutes for Coffee.

1—E. C. Long, of Erie County, N. Y., sends to the *Agriculturist* the following directions, which are the result of several successive experiments to obtain a good substitute for coffee: "Take clean *rye*, boil it in water ten minutes, dry it in pans, and browu it the same as coffee, taking care not to burn it. Then peel some carrots, cut them in small square pieces, dry, and brown them the same as the rye. Grind both the rye and the carrots, and mix one part of the carrots with two parts of the rye. A tablespoonful of the mixture makes a quart of an agreeable drink—an excellent substitute for coffee, we think.... I have heard that beets are good, if prepared and used the same as above described for carrots, but have not experimented with them."

2—Adam Bohn, of Carroll County, Ill., writes that the *Nepaul Barley*, (No. 190 in our Seed list,) is one of the best substitutes for coffee in the country. "Scald or boil it for a few minutes; dry, and browu it. A little Rio Coffee added makes it very pleasant, so much so that some of the oldest coffee drinkers have mistaken it for the pure Rio. An old lady tells me that since adopting the above drink, she has not been afflicted with her former headache, which was so troublesome."

3—O. R. Tisdel, Stephenson County, Ill., writes: Take common garden *carrots*, wash, slice in say ¼ inch pieces; cut across, leaving the pieces about the size of kernels of corn; dry on tins in an oven about 24 hours, then brown and grind the same as other coffee. Use this with one-fourth part or less of Rio or Java coffee, and a rich excellent coffee is made, requiring a good judge to distinguish it from the pure article. It should not be made too strong.

4—W. B., of Oletha, Kansas, writes: We have tried for coffee making, wheat, barley, corn, broom seed, sórghum seed, dourah corn, potatoes, acorns, carrots, parsneps, hickory nuts, and okra, and could only drink three or four of them. Nothing pleases us so much as *dandelion root*, dried and lightly scorched, but never burned. We esteem it a stimulant, tonic in its influence, healthful, and as agreeable to the taste as the pure coffee berry. [This is one of the recipes advertised by some of the *humbug* "Professors" as a 50-cent secret. As a medicinal drink, when needed, a little dandelion root is not objectionable. The U. S. Dispensatory says it is slightly tonic, diuretic and aperient.... is thought to have a specific action upon the liver, and is applicable to derangement of the digestive organs. This is as a medicine. It should *not* be used when there is an irritable condition of the stomach and bowels.—ED.]

5—Wm. Muir, of Lawrence County, Ind., recommends *sweet potatoes;* cut in thin slices, dry in sun or in an oven, and put away until wanted. Pareb say a pint at a time, like coffee, and for a meal for six persons, grind and use about ¼ teacupful. It gives a clear fluid. A bushel of sweet potatoes will supply a family of six, old and young.

6—H. Baster, of Gates Mills, recommends "equal weights of *chicory* and coffee, dried and roasted in the usual manner. The chicory root is raised as easily as carrots, and in exactly the same manner. To prepare the root, wash it clean, slice lengthwise in 4 to 6 pieces, according to size, cut into ⅝ inch lengths, dry and keep in a dry place until wanted." [Chicory is largely used to adulterate coffee in this country, and especially in Europe, 25 million pounds being used in England and France alone. But its prolonged free use produces cramp in the stomach, heart-burn, loss of appetite, acidity, constipation or diarrhea, weakness of the limbs, tremblings and sleeplessness, cloudiness of the senses, etc. For full description of plant, with engraving, mode of cultivation, etc., see *American Agriculturist* for February, 1859—(vol. 18, page 53)—ED.]

7—Jairus Rich, Hamilton County, O., while approving economy in all business transactions, well suggests whether a true patriot will drop the use of coffee, *solely* on account of its extra expense, when all the extra price now paid (and a little more) goes directly to support the expenses of the country in these perilous times.

[REMARKS.—The taste for coffee is wholly an acquired one; nobody likes a *pure* coffee infusion until they learn to do so by long practice, first disguising the coffee taste with milk or cream and sugar. Pure water is always most agreeable to the natural taste. People would feel as well, and *be* quite as well, if coffee and tea were banished, and the saving would be immense. We confess to drinking coffee, but only when prepared thus: The cup ¼ full of home-produced cream; ½ full of *boiled* milk; plenty of sugar; the rest filled up with coffee of fair strength. Such a drink we can "worry down" without much wincing. Tea we have never learned to like, and are too old to begin.—ED.]

To Cook a Beef's Heart—By "Dolly."

[We continue to receive numerous "recipes" on this subject, most of which are somewhat similar to each other, and not materially different from those given last month, page 86, but we can only make room for the following rather amusing letter.—ED.]

To the Editor of the American Agriculturist.

Your just appeal in the February *Agriculturist* in favor of beeves' hearts as a nutritious and cheap food, appears to me to staud in a fair way to be uncultralized, if the directions given by correspondents be followed for cooking by any one expecting anything more palatable or savory than hashed sawdust, or boiled shavings.—Shade of Mrs. Glass to the rescue! "Gash it," says one; "soak it," says another; "boil it," say all. Chop it, mince it, fry it, stew it—effectually spoil it, and then wonder that no one will eat it. But give it the slightest chance, and, if English Hare be justly esteemed a delicacy, Beef Heart is not to be despised.

Don't "boil until tender;" it is tender—nothing more so, if from a well-conditioned animal. Don't "gash it," to let all the juice out—this is delicious, and wanted in the gravy; there are receptacles enough for the stuffing, which should be a simple veal stuffing, richer or plainer, as desired. Wash the heart well in warm water; fill all the tubes and holes with the stuffing, and also spread a deep layer over the top, or thick end of the heart; skewer the *flap* (which must be left on by the butcher) over the stuffing to keep it from falling out. Have the oven at a moderate heat, put in the heart, baste it frequently with butter, and let it *bake* steadily 1½ hours, if it weigh 6 lbs.; or ½ hour more or less for each pound over or under 6 lbs. When within the last quarter of being done, turn the melted butter and drippiugs out into a hot frying pan, return the heart to the oven to finish cooking, while you make the gravy, thus: Add ½ pint *boiling* water to the contents of the frying pan, also (divided into 4 parts) a piece of butter the size of a small egg, sprinkle with the dredger enough flour to thicken, and add salt and pepper to the taste. Set over the fire and stir the gravy until having simmered gradually, it boils, and is done. Put the heart on a *very hot* dish, (a water dish if you have

one) pour over it a little of the gravy, the remainder of which serve up in a *hot* covered butter boat. Have your vegetables ready to serve when the heart is *dished*, your plates *kissing hot*. Cut the heart (beginning at the thick end) in slices lengthwise, eat while hot, and you've a dinner fit for a President. And then, if there be any left from dinner, it makes a hash not inferior to, and much resembling, jugged hare....Be it remembered, that a beef heart chills as quickly as fat venison or mutton, and can not be *fully* appreciated unless eaten when direct from the oven, and on very hot plates.

DOLLY, THE COOK.

Cottage Farm, Dutchess Co., N. Y.

A Good Home-made Yeast.

Mrs. Jane E. Foote, of Onondaga County, N. Y., writes to the *American Agriculturist* thus: "A very nice yeast is made as follows: Peel and boil twelve potatoes; pour off the water, and jam fine. With ready boiling water from the tea-kettle, scald two quarts of sifted flour in a pan, making it about the consistency of thick paste. Add a teaspoonful of ginger, a tablespoonful of *salt*, and the potatoes before prepared, heating the whole well together. When *cool*, add four yeast cakes, previously dissolved in warm water, or a teacupful of hop-yeast. The above quantity will do for a "baking" of three loaves, *four times*, by keeping in a *cool* place. It has this advantage over the usual prescriptions for potato yeast, while answering about as well, viz: that it does not need to be made on every baking day.

Cocoanut Cakes—Cocoanut Jumbles.

Mrs. J. B., of Allentown, contributes the following to the *Agriculturist:* For *cake*, skin one cocoanut and grate fine; add 1 lb. sugar, 1 lb. flour, 1 teacupful milk, 1 lb. sugar, 8 eggs, and spice to the taste.——*For Jumbles:* 1 grated cocoanut, 1 teacupful flour, 1 teacupful butter, 2 teacupfuls sugar, and the whites of 3 eggs. Mix and drop them on baking tins, a little distance apart. They are very nice. [These are the same as are sold by the confectioners, we suppose. They are very good in the mouth, but not so in weak stomachs. We should hardly recommend them for children. Their digestibility depends much upon the fine grating of the cocoanut, unless they are finely masticated by good teeth, before swallowing. The amount of butter used, though perhaps necessary to their good keeping and oily taste, tends to render the cocoanut more indigestible.—ED.]

French Loaf Cake.—By same as above: 1 lb. flour, 1 lb. sugar, 1 lb. raisins, ¼ lb. butter, 1 cup new milk, 1 teaspoonful raisins, 5 eggs, and spice to taste.

A Truce to Corn Bread.

In addition to One Hundred different recipes already published this year, we have on hand nearly 200 others, and the number is increased by every mail. The subject is an important one, and we are glad to have aided to excite so much interest in it; but probably it will not be desirable to devote more space to the topic at present. We return thanks to the many kind contributors, and regret that we can not find room for all their favors. It is rather remarkable that among nearly three hundred recipes contributed for the *Agriculturist*, so few are just alike.—A CORRECTION: In condensing and printing so many recipes, from a variety of manuscripts, a few errors have doubtless occurred. Thus: in No. 32, page 54, (February,) & should be *f* in the word cooked, and read "....When sufficiently *cooled*, etc."—In No. 133, page 87 (March), read: "2 *teaspoonfuls* of salt, etc."

BUTTER IN WINTER.—We return thanks for several recently received communications on this subject, which will be reserved until the more appropriate season, next Winter.—Many good hints on other topics, received, are necessarily laid over.

A True Farmer-Soldier's Wife.

[Since the beginning of the present year, it has been our pleasure to receive about thirty thousand letters from subscribers in different parts of the country, and while mainly on business matters, they have contained very frequent incidental allusions that have afforded us no little pleasure. The historian could gather a true picture of the *feeling* of the country at the present peculiar period, from these offhand private business letters. As we omit the name and town, we violate no confidence in giving the following extract from a recent letter from Edgar County, Illinois, remarking that it is similar in spirit to very many others received, and shows the true character of multitudes of the daughters of the land, West as well as East.—ED.]

MR. EDITOR.—The fact that my husband has exchanged the plow for the sword, has prevented his renewing his subscription; but as I am the farmer now, I must still have the *American Agriculturist*, and I send you the very first dollar I have been able to spare for that purpose. My husband has chanced to receive no pay as yet, though six months in the service, and our farm produce only brings about half price; but we have abundant crops, good health, patriotic husbands, and firm hopes of still having *a country*. So we will "thank God and take courage."

The Editor with his Young Readers.

A Very Good Memory—Some Hints.

Mr. N. L. Wilcox, of Windsor, Ashtabula Co., O., writes to the *Agriculturist*, that Emma Sweet, 15 years of age, learned **2,087** verses in the Bible *during one week*. This is equivalent to 69½ chapters of 30 verses each. Or it is equivalent to all of Matthew (1,071 verses), all of Mark (678 verses), and to the 36th verse of the 7th chapter of Luke. It is equivalent to the whole of the Book of Genesis (1,533 verses), and over 20 chapters in Exodus..... Alvira Moore of the same town, learned in one week **1,515** verses, equivalent to nearly all of Matthew and Mark....Emma and Alvira should be very thankful for such good memories. We would give more than one thousand dollars to be able to learn half as many verses in the same time. Such a memory would save us much time and labor.

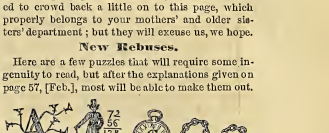
HOW TO IMPROVE THE MEMORY.

A few persons, like those above referred to, have a native faculty of remembering almost everything they read once or twice; but these are exceptions, and we doubt not, that should we ask each one of the hundreds of thousands of boys and girls who read the *Agriculturist*, "Have you a good memory?" ninety-nine in every hundred would answer, "no!" The truth is, almost everybody's memory is poor, until it is trained and cultivated, and the only way to improve it is by use. If a boy puts his arm in a sling, or keeps it hanging by his side, it will grow slim and weak. If, on the contrary, he use it vigorously, holding plow, chopping wood, and in other vigorous exercise, it will grow muscular and strong. The boy who goes into a blacksmith shop as an apprentice, strikes very feeble blows upon the heated iron, at first; he scarcely makes a visible impression. But after a few months' exercise, his blows tell; his arm has not only become strong, but also disciplined to give a proper direction to the blows. Just so with the memory. Exercising it in any direction will give it strength and disciplined power. One having a weak memory, should specially cultivate that faculty. Parents and teachers often make a great mistake; because a child exhibits a dislike of arithmetic, or of any other branch, they let him give more attention to something else, for which he appears to have a liking, or natural tact. The true plan is, to give most attention to the exercise and cultivation of those very faculties which are the weakest. In this way only can a well balanced effective mind be secured. This applies to the education up to maturity of mind and body. With this general discipline, the mind will afterwards act most effectively if its energies are mainly turned in some specific channel of thought.

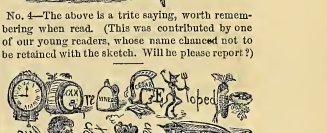
Crowded Again—The Maps.—The continued calls for maps of the scenes of the war operations, show that our readers, old and young, desire these *now*, more than anything else, and they prefer them in the *Agriculturist* to other papers, because our maps are so well printed, and on such good paper. We trust our younger readers are studying geography very rapidly and effectively now; if so, they will cheerfully wait longer for the problems, stories, etc., that would otherwise occupy page 121. As it is, we have ventured to crowd back a little on to this page, which properly belongs to your mothers' and older sisters' department; but they will excuse us, we hope.

New Rebuses.

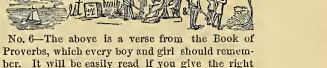
Here are a few puzzles that will require some ingenuity to read, but after the explanations given on page 57, [Feb.], most will be able to make them out.



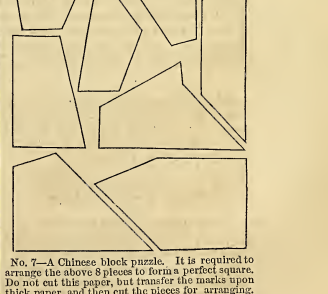
No. 4—The above is a trite saying, worth remembering when read. (This was contributed by one of our young readers, whose name chanced not to be retained with the sketch. Will he please report?)



No. 5—A political axiom, or truth, which is *not* being demonstrated in our country, just now. (Contributed by R. F. Roberts, Racine County, Wis.)



No. 6—The above is a verse from the Book of Proverbs, which every boy and girl should remember. It will be easily read if you give the right character to the men shooting the little birds.



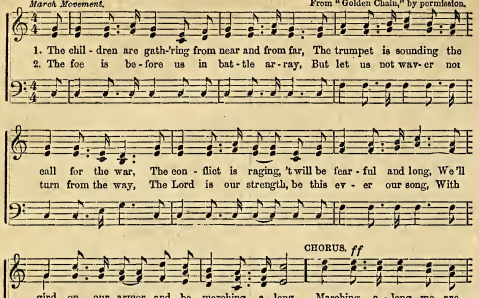
No. 7—A Chinese block puzzle. It is required to arrange the above 8 pieces to form a perfect square. Do not cut this paper, but transfer the marks upon thick paper, and then cut the pieces for arranging.

Answer to No. 2 in February *Agriculturist*, page 57: "*On earth peace, good will toward men.*"

Answer to No. 3, (same page): The Union must and shall be mummy; that is, "*The Union must and shall be preserved.*"

I.—MARCHING ALONG.

Words by R. P. CLARK. *March Movement.* WM. B. BRADBURY. From "Golden Chain," by permission.



3.

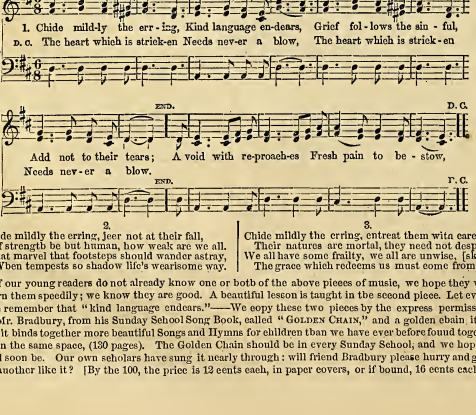
We've listed for life, and will camp on the field,
With Christ as our Captain we never will yield:
The "sword of the Spirit," both trusty and strong,
We'll hold in our hands as we're marching along.
Chorus.—Marching along, &c.

4.

Through conflicts and trials our crowns we must win,
For here we contend 'gainst temptation and sin;
But one thing assures us, we can not go wrong,
If trusting our Savior, while marching along.
Chorus.—Marching along, &c.

II.—CHIDE MILDLY THE ERRING.

36.—*Two to each Measure.* W. B. B



2.

Chide mildly the erring, jeer not at their fall,
If strength be but human, how weak are we all.
What marvel that footsteps should wander astray,
When tempests so shadow life's wearisome way.

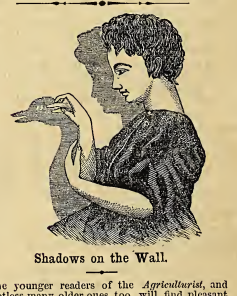
3.

Chide mildly the erring, entreat them with care,
Their natures are mortal, they need not despair.
We all have some frailty, we all are unwise, [skies.
The grace which redeems us must come from the

If our young readers do not already know one or both of the above pieces of music, we hope they will learn them speedily; we know they are good. A beautiful lesson is taught in the second piece. Let every one remember that "kind language endears."——We copy these two pieces by the express permission of Mr. Bradbury, from his Sunday School Song Book, called "GOLDEN CHAIN," and a golden chain it is, for it binds together more beautiful Songs and Hymns for children than we have ever before found together in the same space, (130 pages). The Golden Chain should be in every Sunday School, and we hope it will soon be. Our own scholars have sung it nearly through: will friend Bradbury please hurry and give us another like it? [By the 100, the price is 12 cents each, in paper covers, or if bound, 16 cents each.]

Ericsson's Iron-clad Vessel, "Monitor."

The above sketch, made for the *Agriculturist*, gives an accurate representation of this now famous floating battery, just as we have seen it daily for some time past, while going to and from home. Its wonderful deeds are already familiar to our readers, and we have room for only a brief description. It is 173 feet long, 41 feet wide, and 11 feet deep. An iron hull forms the bottom, and above this is another flat boat or frame, also partly in the water, so that only 2 to 4 feet of its sides are seen, according to the loading. The sides and top are covered with many thicknesses of rolled iron plates, each an inch thick, so that no cannon ball yet made can penetrate them. The machinery is all below water. A very thick cannon-ball-proof tower rises in the middle, 10 feet. This is 20 feet inside diameter, and in it are two largest size cannons, which are fired through port holes that are closed while loading. The tower is turned round by steam, so as to present the guns in any direction, for firing. Each ball weighs 170 lbs. The men are protected from all harm by the thick iron covering. The smoke-pipe slips down, when desired.



Shadows on the Wall.

The younger readers of the *Agriculturist*, and doubtless many older ones too, will find pleasant evening recreation in exercising their ingenuity over the two pictures here given. With a little skill, and some practice in getting the hands and fingers into the positions shown, the dark figures

GRANDPA.

can be thrown perfect and well-defined. (We have several more of these pictures ready to show you.) To make the shadows, they should fall squarely upon the wall, from a single bright light—the hands being placed nearer to the wall than to the light. If more than one wick, or more than one lamp be used, set all the wicks so that they shall be in a direct line with the hand. In this way only can a clear sharp outline be obtained. Many trials will be required to get the fingers in position—a little change of position varies the shadow greatly.

THE MAP above, is a continuation eastward of the map of the Mississippi Valley, given last month (page 89). This map shows the country, the principal towns, and railroads with their connections, of the region lying between Washington in the North-east, Charleston, S. C., in the South-east, Cincinnati in the North-west, and Atlanta, Ga., in the South-west—the last named an important railroad center. The points of most in-

Sewing Machines.

The following report was made at the late Fair held at Utica, N. Y., upon the merits of Sewing Machines. The report will be interesting to those inquiring for the best Family Sewing Machine ·

"We come now to the last articles on our list—speci-"mens of Machine Sewing. We confess our great hesita-"tion in deciding upon their merits, where all are so well "done; but feel assured that our judgment must meet "with approval when we award the First Premium to "No. 971, W. S. Taylor (Grover & Baker's Machine)-"considering the variety of articles made up of different, "materials, exhibited there. To No. 306, two machine-"made shirts, Mrs. Gallup, (Wheeler & Wilson's Ma-"chine,) we would recommend the Second Premium. "In justice to our decision, we would notice the fact that "all the specimens of work done on the Wheeler & Wil-"son Machine are upon plain, heavy fabrics, which are "not considered by the ladies so good a test of the pow-"ers of a machine designed for family use, as when "lighter materials are neatly made up by a skillful ope-"rator."

Mrs. SELDEN COLLINS, Chairman.
M s. C. S. BENNETT, M.s. GEORGE LANE, Mrs. G. O. GREENHILL, } Committee.

PREMIUM LIST,
For 1862---Vol. XXI.

Or Pay to Voluntary Agents who will attend to collecting names of new and old subscribers to the Agriculturist, and forwarding them to the Office.

☞ In selecting articles for premiums, we have aimed to get such as are *useful*. ☞ WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ Every person collecting names for premiums, should send two copies of each list of names—one of them marked "For Premiums," and also with the name of the sender.

☞ The premiums are offered for subscribers for Volume XXI (1862), *whenever received*. Canvassers will have time for completing their lists, but the premium will be paid as soon as any club is made up—if duplicate lists are sent.

Table of Premiums for 1862.

Names of Premium Articles.	Price of Premiums.	Names at $1 each.	Names at 80 cts. each
2—Clothes Wringer, No. 2	$7 50	18	37
3—Clothes Wringer, No. 1	$10 00	23	48
4—Sewing Machine, (Wheeler & Wilson)	$45 00	90	130
5—Sewing Machine, (Wilcox & Gibbs)	$35 00	69	98
6—Aneroid Barometer	$7 50	19	44
7—Hydropult	$12 00	30	48
8—Five Octave Melodeon (best)	$75 00	125	237
9—4½ Octave Melodeon (best)	$60 00	104	182
10—Four Octave Melodeon (best)	$45 00	90	130
11—New Cyclopedia, 16 volumes	$48 00	96	140
12—Worcester's *Unabridged* Dictionary	$7 50	18	40
13—Five back Volumes Agriculturist, *p.p.*	$5 60	16	30
14—Four do do do do	$4 48	13	26
15—Three do do do do	$3 36	10	20
16—Two do do do do	$2 24	..	15
17—One do do do do	$1 12	..	10
18—Windsor & Newton's Paints	$2 50	..	20
19—Osborn & Hodgkinson's Paints	$1 50	..	15
20—Hand Corn Sheller (best)	$6 50	21	40
21—Straw and Hay Cutter (best)	$8 00	24	48
22—Best Subsoil Plow (2-horse)	$8 00	24	48
23—Various Books—*See terms below*			

Premiums 2, 3.—Wringing Machine.

We place this first, for it is nearly new, and one of the most useful articles for every family. We had one of the first made, and have used it 1½ years with the highest satisfaction. It completely does away with the hard straining work required to wring out garments by hand. It does not twist and break the fibers of the clothes, but simply presses them between two elastic India-rubber rollers, which are moved by a crank, and whether large or small pieces, they come out dryer than when wrung by hand. The saving to garments would soon pay the cost of the implement, to say nothing of the saving of woman's labor. The machine is set upon the side of any tub; the garments drop out into a basket. A child can quickly wring out a tub full of clothes—No. **2**, costing $7.50, is just the thing for common family use.

Premium No. 4—Sewing Machine.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person sending them to *Wheeler & Wilson's* best **$45 Sewing Machine**, (including **Hemmer**), new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly *four* years' use in our own family.

Premium No. 8—Melodeon.

125 Subscribers at $1 each, (or **237** at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$75 Melodeons** (5 octaves). These Melodeons are of very superior tone and finish. The size, prices, etc., of these instruments can be learned particularly, by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive catalogue.

Premium No. 11—New Cyclopedia.

96 Subscribers at $1 each, (or **140** at 80 cents each,) will entitle the person getting up the club to a set of *Appleton's* **New American Cyclopedia**, now in course of publication, consisting of *sixteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Fourteen volumes are now ready, and the remaining two will be furnished as fast as issued.

Premium No. 12—Best Dictionary.

18 Subscribers at $1 each, (or **40** at 80 cts. each,) will entitle the person getting up the club to a copy of the *large Pictorial Unabridged Edition of* **Worcester's Dictionary**, (Price $7 50.) This now stands confessedly the most valuable Standard Dictionary published. It weighs nearly **10** lbs.; is **12** inches long, **10** inches wide, nearly **4** inches thick, and contains **1854 pages** of 3 columns each, giving the spelling and pronunciation, with full explanations, of every word in the English Language, and as a source of general information on all subjects, stands next to the Cyclopedia.

Premiums Nos. 13 to 17—Back Volumes.

These premiums (13 to 17,) will enable any one to secure the previous excellent volumes of the *American Agriculturist*, as far back as Volume XVI. We have stereotype plates and can print any number desired of the English Volumes 16, 17, 18, 19, and 20, and of the German Volumes 18, 19, and 20. These will be clean, new numbers, each volume by itself, with index complete, and forwarded *post-paid*.

Premium No. 23—Good Books.

Here is an opportunity to get a good library at little expense. Any person getting up a club of **16** or more names, may choose any desired Books from the list advertised on page 91, *to the amount of 12½ cents for each name sent at 80 cents*, (or 33⅛ cents for each name sent at $1); the books will be *delivered to the recipient free of all expense for postage.*

☞ For descriptions of other premiums see Jan. No., page 28.

Market Review, Prices, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Wednesday Morning, March 19, 1862.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
24 days *this* m'th	304,000	163,000	269,000	119,000	164,000	171,000
25 days *last* m'th	155,000	111,600	134,500	97,700	148,000	172,000

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
24 days *this* month,	311,000	279,000	1,061,000	143,950	265,000
25 days *last* month	394,000	914,000	1,175,000	196,000	186,500

2. COMPARISON WITH SAME DATE LAST YEAR.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
24 days 1862	304,000	163,000	269,000	119,000	164,000	171,000
24 days 1861	156,000	158,800	274,000	7,800	115,000	128,500

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
24 days 1862	311,000	279,000	1,061,000	143,950	265,000
24 days 1861	310,000	1,327,000	1,376,000	14,800	51,300

3. *Exports from New-York, from Jan. 1 to March 19.*

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862	663,937	2,127,034	3,010,950	384,187	30	9,860
1861	439,362	2,348,980	1,656,352	——	1,000	16,841

CURRENT WHOLESALE PRICES.

	Feb. 19.	Mar. 19.
FLOUR—Super to Extra State	$5 60 @ 6 10	$5 20 @ 5 70
Superfine Western	5 60 @ 5 70	5 20 @ 5 35
Extra Western	5 90 @ 7 00	5 45 @ 6 80
Fancy to Extra Genesee	6 10 @ 7 00	5 90 @ 6 80
Super. to Extra Southern	6 05 @ 8 00	5 70 @ 7 50
RYE FLOUR—Fine and Super.	3 00 @ 4 25	3 00 @ 4 25
CORN MEAL	2 90 @ 3 30	2 90 @ 3 25
WHEAT—Canada White	1 48 @ 1 55	1 40 @ 1 50
Western White	1 45 @ 1 58	1 40 @ 1 55
All kinds of Red	1 30 @ 1 50	1 26 @ 1 45
CORN—Yellow	60 @ 68	58 @ 60
White	64 @ 75	60 @ 68
Mixed	64 @ 65	58 @ 60
OATS—Western	40 @ 41	38 @ 39
State	41 @ 42	39 @ 40
RYE	82 @ 85	80 @ 83
BARLEY	80 @ 90	80 @ 1 00
HAY, in bales, per 100 lbs	85 @ 95	75 @ 90
COTTON—Middlings, per lb	27 @	26½@ 27½
RICE, per 100 lbs	7 00 @ 7 75	6 50 @ 7 50
HOPS, crop of 1861, per lb	15 @ 23	12 @ 20
FEATHERS, Live Geese, p. lb.	32 @ 38	34 @ 38
SEED—Clover, per lb	7 @ 7½	7¼@ 7⅝
Timothy, per bushel	@ 2 00	2 12½@ 2 37½
SUGAR—Brown, per lb	6½@ 8¾	6 @ 8½
MOLASSES, New-Orleans, p.gl.	50 @ 55	40 @ 45
COFFEE, Rio, per lb	18 @ 21	19½@ 22
TOBACCO—Kentucky, &c, p.lb.	10 @ 18	8 @ 20
Seed Leaf, per lb	6 @ 21	7 @ 25
WOOL—Domestic fleece, p. lb.	42 @ 54	38 @ 52
Domestic, pulled, per lb	36 @ 50	32 @ 45
TALLOW, per lb	9 @ 9¼	8¾@
OIL CAKE, per tun	31 00 @37 00	36 00 @39 00
PORK—Mess, per bbl	12 37½@13 12½	13 75 @
Prime, per bbl	8 50 @ 9 50	10 75 @10 87
BEEF—Plain mess	11 75 @12 50	12 00 @13 00
LARD, in bbls., per lb	7¼@ 8⅜	7½@ 8¼
BUTTER—Western, per lb	11 @ 15	10 @ 15
State, per lb	16 @ 21	16 @ 21
CHEESE	5 @ 7	6 @ 8½
Broom Corn—per lb	4 @ 6	4 @ 6
EGGS—Fresh, per dozen	16 @ 17	15 @ 16
POULTRY—Fowls, per lb	7 @ 10	9 @ 10½
Geese, per lb	5 @ 9	5 @ 9
Ducks, per lb	9 @ 14	9 @ 14
Turkeys, per lb	8 @ 12	9 @ 14
Dried Apples, per lb	6½@ 7	6½@ 7
Dried Peaches, per lb., peeled	18 @ 20	18 @ 20
Dried Raspberries, per lb	13 @ 14	13 @ 14
POTATOES—Mercers, p. bbl	2 00 @ 2 50	2 00 @ 2 25
Peachblows, per bbl	1 88 @ 2 00	1 88 @ 2 00
Nova Scotias—per bush	55 @ 60	62 @ 65
Sweet Delaware, per bbl	8 50 @ 8 75	8 50 @
ONIONS—Red, per bbl	@ 1 75	2 00 @
White, per bbl	2 00 @ 3 00	2 25 @ 3 00
TURNIPS—Rutabaga, per bbl.	@ 1 00	1 00 @
SQUASH—Marrow, per bbl	1 75 @	2 00 @
APPLES—Common, per bbl	2 75 @ 3 00	3 00 @
Apples—good, per bbl	3 50 @ 4 50	3 75 @ 4 50
Cranberries, per bbl	9 00 @12 00	9 00 @12 00

We have but little space left here, but that little will suffice to report all that is needed this month, aside from the accompanying tables, which give, in condensed form, the receipts, sales, exports, prices, etc. March is always a dull month in the Breadstuffs Market. The surplus stocks have so run down that there is not enough to keep up an active speculation. Heavy dealers are on their oars, resting and getting ready for the heavy business expected on the opening of Spring navigation. Exporters and foreign buyers are in the same condition. The exciting events of the war have absorbed much attention; and the uncertainty as to the tax bills, and the general financial arrangements of the Government, have checked speculation. The few who have been compelled to sell to meet their obligations, have not found active buyers, and, as a consequence, prices have temporarily eased off a little, but very gradually—the greatest change in price of Flour during any day for a month has not exceeded 5 cents on a barrel. On the whole, the state of the market is satisfactory, and a few weeks hence, or as soon as navigation opens, we shall look for much activity in the market again. The present stock of Wheat and Flour on hand is very moderate. Corn is in pretty full supply, and 4 to 6 cents lower than a month ago, in this market. ....Cotton fell rapidly for a time, but has recovered again recently. The present prospect is, that we shall soon have supplies from opened Southern ports, with a decline in prices.... Provisions have been purchased freely, both for home use and for shipment, at irregular prices. The receipts of Hog products continue on an extensive scale, the partial opening of the markets at the Southwest having occasioned no material diversion of supplies from this market thus far....Hay and Rice have been in rather more demand, but the tendency of prices has been downward... Hemp and Hops have been lightly dealt in ... Tobacco has been in active request, partly on speculation, in view of the probable enactment of an excise law, and prices have favored sellers....Wool has been dull and heavy in private trade, the principal feature of the month's business having been the auction sale, at Providence, March 12. The attendance of dealers from New-York, Philadelphia, Boston and Hartford, and of manufacturers, was large. The prices realized, however, were 2½@5 ℘ cent. lower than the average of sales in the market—ranging from 44c. ℘ lb., for No. 4 to XX Ohio, and from 40c. to 45½c. for common to extra New-York State. The decline is mainly due to the prospect of a speedy termination of the war, and a cessation of the demand for army clothing.

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been well supplied, the weekly average being 3,809. At the market, to-day, (March 19) the best cattle brought 9c.@9¼c. ℘ lb, estimated dressed weight; second quality 7¼c.@8¼c.; poor 6c.@7c.; average of all sales, 7½c.@7¾c.; and all sold out.

Veal Calves.—Receipts for the past 4 weeks number 1,781, or 445 per week. They now sell readily at 4½c.@5c. ℘ lb live weight for poor, and 5½c.@6c. for good calves. "Kittens" or "bobs" (3 to 6 days old calves) sell at $1.00@$1.50 each.

Sheep and Lambs.—Receipts have only averaged 5,603 sheep per week during the past month. The market is now brisk at an advance of 1c. ℘ lb. Fat prime sheep sell at prices equivalent to 5¾c.@6c. ℘ lb. live weight, and fair stock 5½c. A few small Spring lambs, the first of the season, brought to-day, $4½@$5 each, or 20c.@25c. ℘ lb. for the meat.

Live Hogs.—Receipts are less, the arrivals being only 13,941 per week for a month past. Good fat hogs are in demand, at advanced rates, while poor light stock can scarcely be sold. Prime heavy corn-fed hogs sell at 4c.@4½c. and light ones, with those fed at distilleries, but 3½c.@3¾c.

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.
TERMS—(invariably cash before insertion):
FOR THE ENGLISH EDITION ONLY.
Fifty cents per line of *space* for each insertion.
One whole column (145 lines), or more, $60 per column.

SOMETHING NEW.—Dr. Brown's Patent Baby Tending Machine. The greatest labor saving, health-preserving and pleasure-giving invention ever made; saves from $100 to $300 per year in any family where there is a baby; costing from $6 to $100. Call and see it. Send for our Circular, containing 20 engravings, illustrating all its shapes, giving prices, etc. Its motion is perfectly charming. Address Dr. J. SILAS BROWN, No. 546 Broadway, N.Y.

FARM FOR SALE cheap for cash, or would be exchanged for a larger one, paying difference in cash. The farm is in the town of Simsbury, Hartford Co., Conn., 11 miles from Hartford, and 1½ miles from railroad depot. It contains 50 acres, including 12 acres of woodland, a good house containing seven rooms, a barn, cow-house, and shed. For further particulars call on or address D. N. HARGER, Avon P. O., Hartford Co., Conn.

MME. DEMOREST'S MIRROR OF THE SPRING FASHIONS contains three large magnificent Fashion Plates, three full size Patterns, comprising the Ladies' new Walking Coat, a new and elegant Sleeve, and a Child's pretty Apron. Also, elegant Engravings of all the Spring novelties for Bonnets, Dresses, Cloaks, Trimmings, and Childrens' Dresses, in great variety. Published quarterly, at No. 473 Broadway, New-York, and sold everywhere at 25 cents, or sent by mail, (post-paid,) on receipt of the price. Yearly, $1, with a valuable premium. Largest, latest, and best Fashion Magazine in the world. Every lady in America can and should have it. Spring number now ready.

Ingersoll's Cheap Hand Power Presses for Baling

HAY STRAW, COTTON, WOOL, RAGS,
MOSS, BROOM CORN, HAIR, HIDES, &c.

These Presses are made for any size or weight of bale required, and delivered on ship board in New-York. Farmers and others wanting such machines are invited to write for Catalogue containing full information.

PRICE OF MACHINES:
No. 1, Press for HAY, &c., weight of bale 150 to 200 lbs., $50.00
No. 2, do. do., do. do. 250 to 300 lbs., 75.00
RAGS, BROOM CORN, &c. 85.00
Weight of No. 1 Press, 800 lbs. No. 2, 1200 lbs.
Over 1000 of these machines are now in use, many of which are extensively used for baling Hay, etc., for the Army.
Address INGERSOLL & DOUGHERTY, GREENPOINT, N. Y.

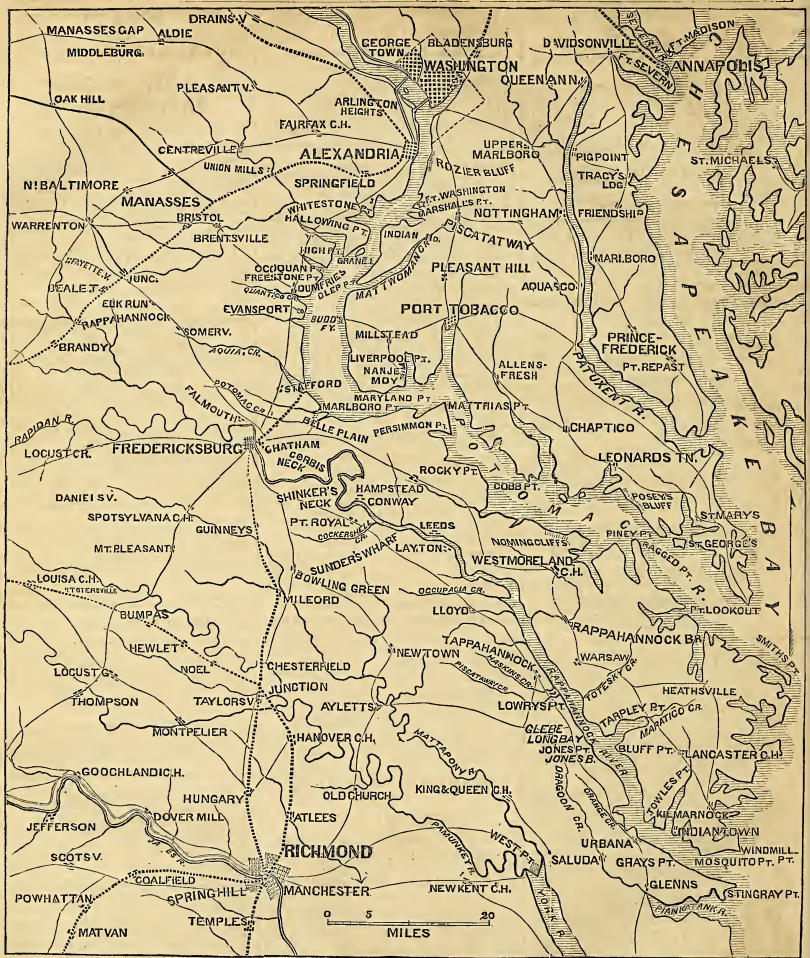
ARTIFICIAL LEGS,
LIMBS, SELPHO'S PATENT,
Substitutes for lost limbs, 516 Broadway. Send for a Circular.

A RELIABLE AGENCY
FOR PURCHASING
ARTICLES OF MERCHANDISE,
IMPLEMENTS FOR THE FARM, GARDEN AND HOUSEHOLD,
FIELD GARDEN AND FLOWER SEEDS.
Special attention will also be given to procuring Sewing Machines; Pianos and other Musical Instruments; Philosophical and Astronomical Apparatus; Books for Schools and Colleges, and School Furniture.
NO CHARGE MADE TO PURCHASERS,
BEYOND THE
LOWEST REGULAR PRICE.
The subscriber is agent for Parsons & Co., who offer a large assortment of
FRUIT and ORNAMENTAL TREES, SHRUBS, ROSES, FOREIGN and NATIVE GRAPES.
THE UNIVERSAL CLOTHES WRINGER
Wrings anything from a glove to a bed spread. Prices, No. 3, $5; No. 2, $7; No. 1, (hotel size,) $10.
METROPOLITAN WASHING MACHINE, $10.
WOODRUFF'S PATENT PORTABLE BAROMETER,
Carried by railroad or stage express in safety. Prices, $5, $8 and $12.
PATENT CYLINDER PLOW. Prices, No. 0, $6; No. 1, $8; No. 2, $9; No. 3, $11; with wheel, $1 extra.
STRAWBERRIES.
Triomphe de Gand, Bartlett, Downer's Chili, and Pyramidal Chili, 50c. per doz.; $1.50 per 100; $10 per 1000.
Great Austin, $1 per doz.; $3 per 100; $20 per 1000.
Hooker's Seedling, Wilson's Albany, and Jenny Lind, 21c. per doz.; $1 per 100; $8 per 1,000.
For $1 I will send by mail, *post paid*, 20 Austin Seedling, or 25 Triomphe de Gand, or 50 Wilson's Albany.
Choice and Reliable Vegetable and Flower Seeds sent by Mail. HARVEY B. LANE,
No. 42 Park-row, New-York City.

Grover & Baker's
CELEBRATED
NOISELESS
SEWING MACHINES,
FOR FAMILY AND MANUFACTURING USE.
495 *BROADWAY, NEW-YORK.*
THE GROVER AND BAKER S. M. CO., now offer, in addition to their splendid stock of Machines making the celebrated GROVER & BAKER STITCH, new and superior SHUTTLE, OR "LOCK-STITCH" MACHINES, adapted to all varieties of sewing. Much more *Simple, Durable, Noiseless and Perfect* than any "lockstitch" machines heretofore in use.
"Grover & Baker's is the best."—*Am. Agriculturist.*
FOR SEWING MACHINES.
JONAS BROOK & BROTHERS' PRIZE MEDAL SPOOL COTTON,
WHITE, BLACK, AND COLORED.
200 or 500 yard spools.
For MACHINES, use BROOK'S PATENT GLACE for upper thread, and BROOK'S SIX CORD LINEN THREAD for under thread. Sold by all first class dealers in city and country; also in cases of 100 dozen each, assorted numbers, by WM. HENRY SMITH, Sole Agent, 99 Vesey-st., New-York.
ITALIAN QUEEN BEES.—I shall continue to breed this season from my well known stock of
ITALIAN BEES,
imported in March, 1861, by steamer New-York. I guarantee the PERFECT PURITY of my queens, being in possession of the ONLY SIX LIVE ORIGINAL ITALIAN QUEENS
IN THE UNITED STATES.
For further particulars apply to C. W. ROSE,
No. 63 Exchange-place, New-York.
P. S.—To suit the times, I have reduced my price to $7 50 for a queen with a few hundred workers.
ITALIAN BEES.
Pure Italian Queens, of brilliant color, forwarded by express to any part of the U. S. Price $3 each, to accompany the order.
No dark colored queens sent out from our Apiary.
BAKER & TAYLOR, Hulmeville, Bucks Co., Pa.
ITALIAN BEES.
FROM THE ORIGINAL IMPORTED STOCK.
For sale by S. B. PARSONS, Flushing, N. Y.
BEES.
The subscriber will sell a large number of Italian Bees—the queens or full colonies. Two hundred stocks of common bees. Glass honey boxes. Books on bee culture, &c. Circular with prices sent on application. Address
M. QUINBY, St. Johnsville, Montgomery Co., N. Y.
THE NEW-YORK AGRICULTURAL
WAREHOUSE AND SEED STORE,
189 & 191 Water-street.
Plows. Plows. Plows.
We would call the attention of FARMER'S and MERCHANTS to our extensive assortment of PLOWS, consisting of more than a hundred varieties, including the EAGLE, PEEKSKILL, and all approved patterns, and particularly to the
PATENT CYLINDER PLOW,
the lightest draught of any in use.
Harrows.—GEDDES, the IMPROVED HINGE, SCOTCH, ROTARY, SHARE'S patent, and others.
Cultivators.—CAST TOOTH, REVERSABLE STEEL TOOTH, LONG ISLAND IMPROVED, SHARE'S patent, and other approved patterns.
Scarifiers, for reclaiming old meadows.
Churns, all the latest and best styles in use.
HORSE POWERS, THRASHERS AND CLEANERS, HAY AND COTTON PRESSES, CORN SHELLERS, FANNING MILLS, ROOT CUTTERS, HAY, STRAW AND FEED CUTTERS, a dozen varieties. Also the EUREKA CRUSHER AND CUTTER, OX YOKES, WHEEL-BARROWS, SEED SOWERS, CORN PLANTERS, CARTS AND WAGONS, FIELD AND GARDEN ROLLERS, WHEAT DRILLS with grass seeder attachment, LIME AND GUANO SPREADERS.
Horticultural Tools, consisting of a large assortment of SPADES, SHOVELS, RAKES, HOES, FORKS, TROWELS AND LINES, PRUNING SHEARS, KNIVES AND SAWS, GRAFTING AND BUDDING KNIVES, VINE SCISSORS, &c.
Draining Spades and Scoops of all sizes.
Fertilizers.—No. 1 PERUVIAN GUANO, ALLEN'S MANIPULATED GUANO, SUPERPHOSPHATE OF LIME, a reliable article, POUDRETTE of the Lodi Manufacturing Co., FRASER, PURE GROUND BONE, by the ton or barrel.
We always have on hand the largest and best assortment of AGRICULTURAL AND HORTICULTURAL IMPLEMENTS to be found anywhere in the City. R. H. ALLEN & CO.,
Successors to R. L. Allen.
NATIONAL AGRICULTURAL WORKS.
HAINES & PELL,
SUCCESSORS TO TREDWELL & PELL,
27 Cortlandt-st., New-York.
AGRICULTURAL IMPLEMENTS and MACHINES,
SUGAR CANE MILLS and other MACHINERY,
PURE PERUVIAN GUANO and other FERTILIZERS,
GARDEN, FIELD, and FLOWER SEEDS of BEST quality.
AGRICULTURAL BOOKS at publisher's prices.
HORTICULTURAL IMPLEMENTS and MACHINES.
FRUIT and ORNAMENTAL TREES, EVERGREENS, VINES, &c.
Particular attention is called to SHARES' HARROW, HALSTED'S PATENT HAND CULTIVATOR, STEEL PLOWS, &c., &c.
The Nonpareil WASHING MACHINE.
Is the only reliable one in use. Send for free Circular to
OAKLEY & KEATING, 73 South-st., New-York.
Farm and Garden Implements of most approved Patterns.
SEEDS—Grass, Field, and Garden Seeds, fresh, choice, and reliable, and of every variety.
COTTON SEED, Chinese Sugar Cane, Spring Wheat and Rye, Seed Potatoes, Oats, and Barley, Lawn grass, Clover, Timothy, &c.
BOOKS on agriculture, a large assortment at publisher's prices.
GUANO, Bone Dust, Poudrette, Phosphate, Plaster, &c., of best quality—all for sale at low prices.
Priced Catalogues furnished on application, and seeds sent by mail, postage one cent per ounce.
JOHN VANDERHEIDE, 23 Fulton-st., New-York.
Norway Spruces
at
VERY CHEAP RATES,
For the Lawn and for Hedges.
PARSONS & CO., Flushing, L. I.
The "Allen" and "Red Prolific" Raspberries.
I will sell (bundled, by Express, or otherwise, as directed) a few thousand of these *perfectly hardy* (without winter protection), highly-flavored varieties, at $12 per thousand; $8 for five hundred; or $3 a hundred plants. They should be cultivated entirely in rows 6 feet apart, three feet apart in each row, for the best bearing; or more or less, as the plants of either variety may be had—the *particular* proportion of either not being material. I still find these the best varieties of red raspberry I can propagate. Address money inclosed with order L. F. ALLEN, Black Rock, N. Y.
Large Standard Pear Trees.
For sale by B. C. WICKHAM, Tioga, Tioga Co., Penn.
A large and splendid assortment of large standard Pear Trees. Also Apple and Plum Trees, &c., &c. Ornamental Trees, Shrubbery, &c., &c. All for sale at low prices at his Nursery. Formerly Wickham & Bloodgood.
NEW CANAAN NURSERIES.
STEPHEN HOYT & SONS offer for sale, at low prices, a large stock of Fruit and Ornamental Trees. Also Vines and Small Fruits of all desirable varieties.
N. B. Apple and Peach Trees, a large stock.
New-Canaan, Conn., Feb. 1862.
FRUIT
and
ORNAMENTAL TREES
at
LOW PRICES.
PARSONS & CO.,
offer a fine stock of Fruit Trees at low rates.

Pears	35 to 50 cts.	Cherries	35 cts
Plums	33 cts.	Apples	25 cts.
Peaches	20 cts.	Versailles Currant	20 cts.

These prices are for large and handsome Trees; those of smaller size can be furnished lower. All the other kinds of Fruit, Grape Vines, &c., &c., at corresponding rates.
To those buying in wholesale quantities a large discount will be made.
EVERGREENS
and other
Ornamental Trees and Shrubs
in great variety, and finely formed and well-rooted at low prices.
For Catalogues, address at
FLUSHING, L. I.
FISHKILL LANDING NURSERIES.
D. BRINCKERHOFF & CO.,
FISHKILL LANDING, DUTCHESS CO., N. Y.,
OFFER A LARGE STOCK
OF THE MOST APPROVED VARIETIES OF
FRUIT TREES, &c.
FOR THE SPRING OF 1862.
Also **30,000** well-grown Native GRAPE VINES, of the new and highly prized sorts, about 10,000 of which are Delaware and Diana.
25,000 Currants, of all the new and reliable old sorts.
ROSES, of Hybrid Perpetual, Bourbon, Tea, Noisette, Moss, and Climbing. Experience has shown us that inoculated roses are of little value; we therefore grow them only on their own roots.
Stove, Greenhouse, and Bedding Plants,
of recent introduction, as well as the fine old sorts, in large quantities, and at low prices.
FLOWERING and CLIMBING SHRUBS, a fine stock.
50,000 Deciduous Ornamental Trees, suitable for LAWNS, AVENUES, and CEMETERIES.
75,000 Evergreen Trees, of all the most approved hardy sorts.
☞ Having been over twenty years engaged in the nursery business, our experience enables us to take up and pack Trees and Plants so that they will reach purchasers in good order.
Our prices are low, and Trees, &c., of superior quality. Catalogues sent to all applicants.
No. 1.—Descriptive of Fruits and Shrubs.
No. 2.—Descriptive of Stove, Bedding, and Greenhouse Plants.
TREES AT LOW PRICES.
For Spring of 1862.
ELLWANGER & BARRY
RESPECTFULLY invite the attention of the public to their present immense stock, covering upward of FIVE HUNDRED ACRES OF LAND, and embracing everything desirable in both
Fruit and Ornamental Departments,
Grown in the very best manner and offered either at wholesale or retail, at greatly reduced prices.
Parties who contemplate planting should avail themselves of this opportunity, the like of which may not occur soon again.
Descriptive and Wholesale Catalogues forwarded gratis on receipt of a stamp for each, and all information as to prices, &c., promptly given on application.
MOUNT HOPE NURSERIES,
ROCHESTER, N. Y.
TREES, TREES AND GRAPE VINES.
A large stock embracing Standard and Dwarf Trees of all the choicest Fruits for the Orchard and Garden, fine, healthy, well-grown trees.
Grape Vines comprise all the new and rare sorts. Beautiful Ornamental Trees and Greenhouse Plants. Orchardists and all those who wish to beautify their grounds, should embrace this opportunity, and buy cheap by the dozen, 100, or 1000, all warranted true to name. (Seedlings and Stocks for Nurserymen.) Catalogues furnished on application.
W. T. & E. SMITH, Geneva Nurseries, Geneva, N. Y.
Dwarf Pear Trees and Hardy Grape Vines.
A general stock of Fruit and Ornamental Trees of most desirable varieties for market, on moderate terms. A good stock of Duchesse d'Angouleme Pear Trees, which excell all others for profit. Also the most desirable hardy Grape Vines, at astonishingly low prices by the 100 or 1000.
Walworth Nurseries, Wayne Co., N. Y.
T. G. YEOMANS.
EVERGREENS.—John W. Adams, Portland, Me., forwards Arbor Vitæ, Hemlock, and other Forest Trees of good quality, VERY LOW. Catalogues ready.



Map of Eastern Virginia--"Department of the Potomac"--(*See Pages* 101 *and* 121.)

CRANBERRY PLANTS—2,000,000 fine, healthy, *cultivated* BELL or UPLAND, and CHERRY or MARSH Cranberry Plants, for sale at low prices.
The CRANBERRY CULTURIST—A practical treatise on Cranberry Culture, sent by mail, prepaid for four red stamps.
WM. H. STAHL,
East New-London Nurseries, New-London, Conn.

CRANBERRY PLANTS.—The subscriber offers for sale a large stock of Cranberry Plants of the celebrated Upland Bell, Lowland Bell, and Cherry varieties. For prices and information on the culture enclose stamp and send for a circular.
P. D. CHILSON, Bellingham, Mass.

The Cranberry and its Culture.
The Subscribers have issued a circular from the press, treating on the Cranberry and its Culture. Said Circular will give persons the proper information as to the commencement of the culture. They will take pleasure in forwarding them to all parts of the United States, to those sending stamp to pay postage. Persons wishing plants in large or small quantities, may receive them by express, for wet or dry soil. Address
SULLIVAN BATES & CO.,
Bellingham, Norfolk Co., Mass.

"CRANBERRY CULTURE."—An extensive Cultivator of this fruit offers his services to inspect lands, or to contract for planting bogs. Will visit any part of the country.—One acre of waste "bog meadow" will net more than the best farm. Selected plants furnished very low. Address "CRANBERRY," care of C. M. Saxton, Agricultural Book Publisher, 25 Park Row, New-York.

THE AGRICULTURAL ALMANAC,
Containing reliable information in regard to *Poudrette, Guanos, Bones*, and other fertilizers, will be sent free to any one applying for the same. Address
GRIFFING, BROTHER & CO.,
No. 60 Courtlandt-st., New-York

Map of Part of North Carolina.--Field of Burnside's Operations.

☞ **For other Advertisements,** see pages **122, 123, 126, and 127.** (It is necessary to divide these Advertisements, in order to get the Maps on the right, or second side of the sheet, for convenience of printing.—Ed.)

200,000 SUMMER FLOWERING PLANTS.

COMPRISING:

40 finest varieties Carnations, $1.50 per dozen,
100 do. do. Verbenas, $1 per dozen, $8 per 100.
100 do. do. Chrysanthemums, $2 per doz., $14 per 100.
60 do. do. Fancy Geraniums, $3 to $5 per dozen.
100 do. do. Dahlias, $1.50 to $3 per dozen.
24 do. do. Fuchsias, $1.50 to $3 per dozen.
40 do. do. Hardy Phlox, $2 per dozen.
50 do. do. Monthly Roses, $3 to $4 50 per dozen.
25 do. do. Hybrid Perpetual Roses, $3 per dozen.

Miscellaneous assortment, consisting of Asters, Antirrhinums, Cupheas, Delphiniums, Daisies, Pansies, Scarlet Geraniums, Heliotropes, Petunias, Tuberoses, Salvias, &c., &c., $1 per dozen, $6 per 100.

No charge for baskets or packing. A liberal discount to dealers, or when large quantities are taken. Descriptive catalogues on application.

PETER HENDERSON,
Jersey City, N. J.

Samples daily at No. 9 Johnst., New-York.

NANSEMOND SWEET POTATO PLANTS.—A superior article, as in years past—adapted to Northern planting—packed to go safely long distances, at $2 a 1,000; 5,000 $9; 10,000 $15—during May and June. Our plants have given pleasing results in the North for many years—growing good crops as high as 40 lb. Send stamp for my Circular on growing and keeping Sweet Potatoes, with experience of growers, &c.

C. B. MURRAY,
Foster's Crossings, Warren Co., Ohio.

☞ **SWEET POTATO PLANTS.** ☜

Best kind, "Nansemond," will be ready in season, May and June. Price 25 cents per 100, $2 per 1000—packed with care, sent as directed. Send orders in early.

J. C. THOMPSON, Tompkinsville, Staten Island, N. Y.

DWARF BROOM CORN SEED.

For sale at six cents per ounce, post-paid. Address
J. B. AYRES, Shiloh, Cumberland Co., N. J.

RUSSIA OR BASS MATS, SELECTED EXpressly for budding and tying. GUNNY BAGS, TWINES, HAY HOPES, &c., suitable for Nursery purposes, for sale in lots to suit by
D. W. MANWARING,
Importer, 248 Front-st., New-York.

CHERRY, PEAR, AND QUINCE STOCKS, just Imported from France, and for sale by
C. RAOUX, 78 Cedar-st., New-York.

CONN. SEED LEAF TOBACCO SEED.—Grown for J. M. B. McNARY & CO., Hartford, Conn., and warranted by them from the finest stock—50 cents per ounce by mail.

TRIOMPHE DE GAND.

We have undoubtedly the largest stock of *genuine* plants to be found any where, which we offer at 50 cents per dozen, $2 per 100, $10 per 1000.

J. KNOX,
Box 155, Pittsburg, Pa.

Dwarf Broom Corn Seed.

A new variety, which seldom grows more than four feet in hight—producing a greater weight of broom, and of superior quality to the ordinary kind, is now offered for sale for the first time by
ROGERS & GEST,
No. 133 Market-st., Philadelphia, Pa.

SEEDS! SEEDS!!

We have in store a full assortment of FIELD and GARDEN SEEDS, among which will be found all the varieties,

Corn—Extra Early Sweet, Large Sweet, Evergreen, Large Yellow, White Flint, and Improved King Philip.

Peas—Of all the approved varieties.

Turnip—Early and Late, Red Top Strap Leaf Flat, White Flat, White Globe, Yellow Stone, Aberdeen, Skirving's Purple Top Ruta Baga, Ashcroft's Swedish, Waite's Eclipse, Improved American Purple Top Ruta Baga.

Carrot—Long Orange, White Belgian, and Altringham for stock.

Beet—Long Red Mangel Wurtzel, Globe Mangel Wurtzel, and White Sugar.

GARDEN SEEDS OF ALL KINDS.

Fruit Seeds.—Apple, Pear, Quince, Cherry, Currant, Gooseberry, Strawberry, &c.

Ornamental Tree and SHRUB SEEDS of every variety.

Honey and Yellow Locust, Buckthorn, and Osage Orange for Hedges.

Clovers.—White Dutch, Red, Alsike, Lucerne, &c.

Grasses.—Timothy, Red Top, Kentucky Blue, Orchard, Foul Meadow, Fall Oat, Hungarian, Saint Foin, Sheep's Fescue, Fine Mixed Lawn, &c.

Wheat.—Spring Wheat, Tea, Black Sea, Golden Drop or Fife.

Rye.—Spring Rye, Spring Barley. Also a new variety of Beardless Barley.

Seed Oats.—Extra heavy and clean.

Potatoes.—Early Varieties—JUNE, DYCKMAN, and PRINCE ALBERT. Late Varieties—PEACH BLOW, MERCER, GARNET CHILI, an excellent yielder. UNION—a *new* and very fine kind—not liable to rot.

Flower Seeds of every variety in bulk or papers.

Bulbs and ROOTS furnished to order.

Fruit and ORNAMENTAL TREES, SHRUBS, EVERGREENS and all kinds of PLANTS carefully packed and sent to order, from the best Nurseries and Conservatories in the United States. The latest and best WORKS on Agriculture, Horticulture, Live Stock, &c. Send for a Catalogue.

R. H. ALLEN & CO., successors to R. L. ALLEN,
189 & 191 Water-st., New-York.

J. M. THORBURN & CO.'S

Seed Warehouse,

15 JOHN STREET, NEW-YORK.

SEEDS BY MAIL.

SEEDS FOR THE FARMER.

SEEDS FOR THE GARDENER.

SEEDS FOR THE FLORIST.

SEEDS FOR THE NURSERYMAN.

SEEDS FOR THE AMATEUR.

SEEDS FOR THE DEALER.

Send for our DESCRIPTIVE PRICED CATALOGUE OF VEGETABLE AND AGRICULTURAL SEEDS FOR 1862.

Send for our DESCRIPTIVE PRICED CATALOGUE OF FLOWER SEEDS FOR 1862.

The two pamphlets contain the largest collection of seeds to be found in this country, embracing every standard and improved variety, together with all the NOVELTIES OF THE DAY.

GARNET CHILI POTATOES. A seedling introduced by C. E. Goodrich, he claims for it a higher degree of hardiness and adaptation to all soils and weather than any other sort known, and in good soils and seasons, and with fair culture, they will yield from 300 to 350 BUSHELS TO THE ACRE.

Price per peck, 50c., per bushel $1.50, per barrel of 2¾ bushels, $4.

All the following varieties of SEEDS mailed, *post-paid*, to any part of the United States, (with the exception of those marked thus *, which may be mailed to those wishing them by this conveyance, at an additional expense of one cent per oz.,) on receipt of the amount annexed.

	cts.
New Speckled Lima Beans, ... per pkt.	25
New Corrugated Pole do.	25
Thorburn's Nonpareil Cauliflower..... per oz. 75c.	do. 10
Early Paris ..... do. 75c.	do. 10
Giant White Solid Celery..... do. 25c.	do. 5
Improved N. Y. Purple Egg Plant.... do. 60c.	do. 10
Early Wilmingstadt Cabbage..... do. 25c.	do. 5
New Cottager's Kale..... do. 20c.	do. 5
Early Vienna Kohl Rabi..... do. 20c.	do. 5
New Jersey Hybrid Cucumber (v'y long) do. 50c.	do. 5
Early Curled Silesia Lettuce ..... do. 20c.	do. 5
New Large Japan Melon (early).....	do. 25
Huntington do. (very large).....	do. 25
Strawberry Watermelon	do. 25
French Scarlet Turnip Radish..... per oz	10
New Mammoth Edible podd Radish..... per pkt	10
Honolulu Nectarine Squash..... per oz	30
Fejee Island Tomato..... per oz. 25c.	per pkt. 5
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Berlin Tetter Turnip ..... per oz.	10
Extra Early Princess Peas..... per qt.	30
*Champion of Scotland, Eugenie and Napoleon	do. 50
Peas, each.....	50
Large Sweet Mountain Pepper..... per oz. 40c.	per pkt. 5
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*Honey Locust Seed..... do. 60	do. 10
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do. do. Double	do. 25
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CAUTION.

The Lodi Manufacturing Co. wish it distinctly understood, that *other brands* of Poudrette than theirs are in market, put up in barrels to resemble theirs, and that the following, viz:

Staten Island Poudrette Co.,
Griffing Brother & Co. Poudrette,
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all emanate from the same place on the Staten Island salt meadows.

That although the barrels are a good imitation, the material inside is *totally different*, being coarse and black, full of rye, neaty fibers, and free from rubbish, while the Lodi Manufacturing Co.'s Poudrette *contains no peat*, is the *exact color of dessicated night soil*, a grayish brown, and contains the usual amount of foreign matter, coal ashes, gravel, etc., in minute particles, with which the night soil of great cities is always mixed, and which it would be too expensive or impossible to separate. A little stacked lime is a-ways mixed with twice its bulk of Poudrette, slightly moistened and rubbed through, will soon convince the most ocpse nasal organs, as to which is a genuine article, by the ammoniacal smell arising therefrom. Our only orders are for the pure article. The Lodi Manufacturing Co., established 22 years.

THE LODI MANUFACTURING CO.,
60 Courtlandt-st., New-York.

Fine bone dust, *warranted pure*, also for sale.

PROVIDENCE COMPANY'S CONCENTRATED BONE FERTILIZER.

This is the best Fertilizer, at the price, ever offered to the farmer.

It is composed of pure bone, ground fine, with other materials added to give it immediate effect.

It powerfully stimulates the plant from the moment the seed germinates until harvest.

It will not only fill the farmer's crib, but will enrich the soil. Try it.

It is packed in good flour barrels, and delivered to vessel or railroad, in New-York City, free of charge for carriage, at the following prices:

For one barrel, $2; two, $3 50; three, $5; four, $5 50; five, $8; six, $9 50; seven and over, $1 50 per barrel.

Two barrels will manure one acre of corn in the hill.

Send your orders, inclosing the cash, by mail, to

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A. LISTER & BROTHER, Tarrytown, N. Y.

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We guarantee every tun of our manufacture to be of uniform quality, and invite trials or chemical analysis.

We also manufacture from RAW, (OR UNBURNED), BONES, the fine, medium, and coarse ground **Bone Manure**, for lasting as well as immediate effect upon all kinds of farm crops. The coarse ground particles are valuable for *Fruit Trees* and *Grape Vines*, which require a constant and lasting source of nourishment.

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Office 189 & 191 Water-st., New-York.

For testimonials of this valuable fertilizer address it. H. ALLEN & CO., as above.

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THE STANDARD MANURE.

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Office 32 South-st., Baltimore, and
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100,000 Barrels
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LODI MANUFACTURING COMPANY'S
POUDRETTE,
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The large facilities which they enjoy by exclusive contract for all the night soil of the City of New-York, and large capital invested in their extensive works, enable them to manufacture an article which is superior to any other fertilizer in market, taking *cost and yield* into consideration. It will be sold at the usual price of $1 50 per barrel for seven barrels or over, delivered free in New-York City.

Please take notice that the office and sale of this Company's Poudrette is changed from Messrs. Griffing, Brother & Co., No. 60 Cortlandt-st., to No. 66 CORTLANDT-ST.

Other brands of what purports to be Poudrette are in market, put up in barrels to resemble this. Beware of frauds—buy that only which has the brand of the Lodi Manufacturing Co. Any other article is comparatively worthless.

We call the attention to the following experiences of practical farmers, in different sections of the country:

NORTH PEMBROKE, Mass., Oct. 7, 1861.

James R. Dey, Esq., President of the Lodi Manufacturing Co.:

Dear Sir—The early autumnal frosts for several years past have seriously injured our corn crops, and rendered it necessary for farmers in this section to seek some fertilizer that their crops an early start, in order to bring them to maturity in season to avoid that calamity. Having experimented with Guano, Superphospate of Lime, etc., with indifferent success, in the spring of 1860 I purchased four barrels of the Lodi Manufacturing Co's Poudrette, which I applied principally on my corn crop, with the most satisfactory results. This was the first Poudrette ever introduced into this vicinity. Last Spring I purchased from your branch office in Boston about thirty barrels, the most of which I sold to my neighbors, who had witnessed the effect of my last year's trial, which, so far as has been heard from, has given universal satisfaction. To further test the efficacy of your Poudrette, this season I ploughed under two acres of light, sandy soil, which had laid in grass about six years, (the last crop very light.) Upon this I planted with corn and potatoes, applying about four and a half barrels of Poudrette. In other manure I applied a handful of ashes to each hill at the first hoeing and from present appearances I shall have a better crop than on a field of like soil where we applied twenty-five loads of manure to the acre. Its effects on garden vegetables are equally apparent. I am, very respectfully, yours,

HORACE COLLAMORE.

MERRILL, Me., Oct. 11, 1861.

Lodi Manufacturing Co.:

Sirs—I bought of your agents, Cross & Newell, two barrels of your Poudrette, and in using the first, I got sick of it and sold the other barrel. But the one that I used I tried the principal part on potatoes. I used about half a pint to the hill, and the yield was equal to those planted on manure at the rate of twenty loads to the acre. My neighbor, who bought the other barrel, says if he had bought five barrels more, he would have saved the price of twenty barrels.

Yours, &c., V. B. PAUL.

WALDO, Me., Oct. 12, 1861.

To the Lodi Manufacturing Co.:

Gentlemen—Last Spring I bought of Cross and Newell one barrel of your Poudrette and experimented, but with very little faith in its utility. I put it on six rows of corn in different parts of the field, after running with a barrel of manure, in the usual way—at the second time hoeing. Where I put the Poudrette the corn was twice as large as the rest of the field, and the ears on it one-third heavier, and has ripened about eight days earlier. I think it the very thing we want for raising corn on this country, and shall use it more extensively another year. Yours, &c.,

WELLINGTON SHOREY.

SMYRNA, Del., Oct. 1, 1861.

Gentlemen—I had heard of the Poudrette manufactured by the Lodi Manufacturing Co., and bought it, would try a small quantity on a lot of land intended for corn, and as I could not get it nearer than Philadelphia, I went and bought of the agent twenty barrels, and applied two barrels to the acre, dropping the corn and a handful of Poudrette in each hill. I left out a part of two rows, and put no Poudrette, to ascertain if there was any value in it, and noticed those two rows during the season, and the Poudrette produced a heavy crop, the corn was decidedly the best, and I have no hesitation in saying it is a good manure for corn. I am certain I made from one-third to one-half more by using it.

Yours, respectfully, JOHN G. BLACK.

CHESTER, Pa., Sept. 15, 1861.

To the Lodi Manufacturing Co.:

Gentlemen—I purchased this season of Messrs. Baker & Co., eleven barrels of Poudrette and one bag of Phnlin, which I put on my corn. I marked the place where I put the Phnlin, which, without being scattered about, but now the corn where the Poudrette was on is much the best. Last year I used Allen & Wendle's new Fertilizer, which did no good at all, as the corn done better without the manure. I think the Poudrette made by your Company the cheapest manure in use. Yours, &c.,

A. B. PERKINS.

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THE AMERICAN AGRICULTURIST is published in both the English and German Languages. Both Editions are of the same size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs. A club may be part English, and part German.

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One Hundred Dollars are offered for the best five specimens of cotton grown above latitudes 38° and 40°, this year. See particulars in February *Agriculturist*, page 64.

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Only from April 1 to May 10, 1862.

(And at no other time.)

Our general Premiums for Vol. 21 are continued as usual, (see list on page 122). To meet the wishes of very many who have recently written us on the subject, we make a special offer, which applies *only* to subscribers *hereafter received* up to May 10th, 1862. (These subscribers are not to be included in the general premium list.)

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I. To any person forwarding, after April 1st, and before May 10th, ONE subscriber to the *American Agriculturist*, at $1 a-year, (*to begin Jan. 1st, 1862,*) we will present (if desired) **Ten Plants of the Triomphe de Gand Strawberry,** forwarded free. These plants set in good soil early this Spring, will multiply greatly the present season, and furnish plants enough to start a large plot in August, for fruiting next year.

II. To any person forwarding, after April 1, and before May 10, TWO subscribers to the *American Agriculturist*, at $1 each, (for the year 1862,) we will send (if desired) **Twenty-five Plants of the Triomphe de Gand Strawberry,** to be forwarded free as above.

III. To any person forwarding, after April 1st, and before May 10th, THREE OR MORE subscribers for the present year, (from Jan. 1,) at $1 each, we will present, **for each name, Fifteen Plants of the Triomphe de Gand Strawberry,** to be forwarded free as above.—N. B. When three or more names are sent together, the recipient may order, if desired, one-fourth of the plants to be the BARTLETT STRAWBERRY, a new and very promising variety.

N.B.—1st. Three days before sending out the above plants, a printed slip or circular will be mailed to each person entitled to receive them, notifying him of the day on which the plants will be mailed, so that they can be looked for on their arrival. The printed slip will also contain directions for treatment of plants, soil, culture, etc.

2d. If plants are to be called for at the office, please give at least two days' notice, that we may bring them in from the country at the specified time.

3d. Special to Canadian Subscribers.—In a few cases, Canadian Postmasters have charged *letter postage* (3 cents an ounce,) on the arrival of plants and seeds which we had prepaid here. There seems to be no regularity, and we can not yet get any definite decision from the General Secretary at Toronto. We therefore advise Canadian subscribers who desire to avail themselves of the above premium offers, to arrange to receive the plants at some United States Post-office on the lines, or if this be impracticable, to receive them by Express, making the club of names large enough to render this an object. When thus sent *by express* to Canada, at expense of recipient, we will double the number of plants.

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An American Exhibition OF Pumpkins, Squashes, and Ornamental Gourds.

Our English neighbors are just waking up to the value of the Cucurbitaceous Family, (pumpkins, squashes gourds, etc.). The Royal Horticultural Society of England, for the first time in its history, has arranged for a "Great Gourd Exhibition" next October, and invites all the world to competition. As Americans, we would like to compete with Great Britain, and all Europe, in raising Pumpkins and Squashes, and we at first thought to ask our readers to send all their specimens to the *Agriculturist* office, to be forwarded to London, at our own expense. But the London Exhibition is appointed too early (Oct. 8,) to allow our specimens to fully mature, and be forwarded. Let us then have an AMERICAN EXHIBITION, and see what can be done *here*. The results can be compared, and we shall then know whether we would have been successful or not, could they have been sent to London. The results will be the same, and equally beneficial in stimulating improvement.

There being no Royal Society here, we will undertake it single handed, and offer prizes fully equal to those of the London Society. (Two individual offers of £5 are made by Dr. Lindley, and Mr. Wilson Saunders). If any gentleman will do the same here, we will be happy to announce it next month. Our own proposal is as follows:

There will be a Public Exhibition of **Pumpkins, Squashes, and Ornamental Gourds,** at the office of the *American Agriculturist*, 41 Park Row, New York City, opening on Wednesday, Nov. 5th, 1862, at which the following prizes will be paid by the Publisher, upon the award of competent Committees.

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Note 1.—The specimens receiving the Prizes will remain on Public Exhibition at the pleasure of the Publisher who offers the prizes. The other specimens will be subject to the order of the exhibitors, or be sold at Auction or otherwise disposed of, for their benefit.

Note 2.—All Exhibitors must notify us of their intention by Oct. 20th, and deliver specimens for competition on or before Nov. 3d. All specimens must be delivered free of charge. ORANGE JUDD, *Publisher*.

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☞ Other Journals are invited to copy desirable articles freely, if each article be credited to *American Agriculturist.*

May

"The most unfurnished with the means of life,
And they that never pass their brick wall bounds,
To range the fields, and treat their lungs with air,
Yet feel the burning instinct."—

The passion for rural life comes as near to being universal, as any sentiment that rules the human heart. It is universal, notwithstanding the very large population congregated in cities, and that never expect to live elsewhere. The poor and thriftless live there not as a matter of choice, but of necessity. They find themselves in the city without any volition of their own, and they have not force of character enough to get out into the country, where land is cheap, and thus strike for independence. If they labor at all, they are accustomed to labor for others, to spend as fast as they earn, and to suffer when they can find no employment. They have no faculty to set themselves at work, and have never tried to make money earn money by trade, or mechanical employments. With all their longings for fresh air, and sunlight, they expect to live and die in the miserable tenements poverty compels them to occupy. The laboring thriving class in the cities, mechanics, clerks, and small tradesmen, have visions of rural bliss, which they expect to realize, but they are so far in the future that they have not yet taken definite form. They do not earn enough to admit of their living in the country while they do business in the city, or their business does not admit of such an arrangement. Country life is an expensive luxury, in which they hope they shall one day be able to indulge. Multitudes who have attained this felicity, do not know exactly how to afford it. The rent is cheaper, but the rides they find cost quite as much as in the city, and the markets are as dear. Vegetables and fruits do not come so early, and they are generally sold higher than in the city. Country life is very delightful, but it uses up a salary of $2,000 just as effectually as life in the city. The children enjoy it, are fat and happy, and are learning a multitude of clever things, that they could not know in the city; the wife is pleased, the society is good, and the schools are as a general thing, quite as good as in the city; but it all costs too much—it can't be afforded.

"How to make rural life pay?" that is the question with all classes who ever expect to enjoy a home of their own in the country. There can be no doubt that multitudes, perhaps a majority who go into the country spend from a quarter to a third more than they need to, because they do not avail themselves of the advantages of the country. The theory of living is different in the county. Here a man produces every thing he can economically. In the city he buys everything, paying for it with his skill, labor, or capital, sold in the market. The citizen has no time to study the art of "making one hand wash the other." In the country, this is the great secret of economical living. You go into the country to have room, a house, and a few acres of land, delightful rides over the country with wife and children, to entertain your cousins and family friends with strawberries and cream, fresh laid eggs, and broiled chickens, in their season. Now if you buy all these nice things at your rural home, you will find the bills quite as large as in the city, and possibly larger. It is the easiest thing in the world for a family to run up a bill of three or four hundred dollars at the village stable, and then feel that they have not had half riding enough; two hundred dollars at the butcher's, feeling that they have had to stint themselves in poultry; fifty dollars with the milk man, with but half a supply of milk, and no cream at all; four hundred dollars at the grocer's, with eggs only once a week, and lean pickings at dessert.

Now we shall manage these things very much more economically, if we adapt ourselves to the conditions of rural life. You have two objects in view in a rural home, economy, and the better education of your children, meaning by that, what they get outside of the schools. It is worth a good deal to a family of children, to have them familiar with all the details of country life, the care of domestic animals, the management of a flower and vegetable garden, familiar with the trees of the wood, and plants of the field. Things move in a circle in such a home, and every link in the chain must be complete to make the rural home a paying concern. If you have land it must be worked to make it bear crops. To do this economically, you must have labor and manure. To have these in the most economical form, you must keep a man, and domestic animals. You have to pay out money for your help, and for your provender, but you get for it cheap rides, and all you want, cheap eggs, poultry, milk, cream, cheap fruits and vegetables, and the rural schooling for the children, which is a matter of prime importance.

Your man will cost you not far from $120 a year and his board, the keeping of the family horse, with the interest of money invested, and the wear and tear of vehicles, harnesses, etc., about $100, and the cow from $40 to $75, according to size, skill in management, and other considerations. You will want two pigs and thirty hens to complete the circle. These gather up the fragments, and turn the last particle of refuse matter to profitable account.

You want Patrick the year round, to attend to the horse and the cow, and with a little management, he need not have an idle hour. In the Summer he takes care of the garden, teaches the boys to hoe and spade, to harness the horse, and ride him, to hunt hen's nests, and feed the chickens. In the Winter, when the horse is not in demand for rides, he is busy drawing muck and manure. In such an establishment 40 or 50 cords of manure may be made, which will keep the land in a high state of productiveness. Patrick pays his way in garden products, a full supply for the family, with a small surplus for the village market, and a few hundred bushels of beets and carrots for the cow and horse. The horse pays his way in drives, and in aiding Patrick in his winter work. The cow pays her way in milk and cream, and if a very good one, in butter for three months in the year. The skim-milk goes to the pigs, and to mixing meal for the hens. The market value of her products will be from $50 to $100, according to the excellence of the animal, amount of feed, etc. The hens will pay their way in eggs and poultry. We have kept accounts for several years, and found the profits to average about $1 for each fowl kept through the year. The expense of keeping where all the food is purchased, is also about $1 each. The pigs are economical as coworkers with Patrick, in manufacturing fertilizers, and for furnishing about 600 pounds of pork and hams, of much better quality than you can buy in the market. There is nothing like the pork packed in your own cellar, for the weekly dish of baked beans, and that other dish known in its glory only in the country, succotash. There are no hams like those cured after your wife's recipe, as good a year old as when first cured, but always failing to keep a year, for the best of all reasons—they are eaten.

With us, rural life pays, and we can readily see that others can make it pay very much better than we do. But the art of living in the country, and indeed of living at all has always to be learned, and it is quite easy to see that the learning may be somewhat expensive. We offer these brief hints for those who are taking their first lessons this Spring, assuring them that with economy it will pay, and warning them not to anticipate too much the first season.

Calendar of Operations for May, 1862.

[A glance over notes like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 39° to 43°; but will be equally applicable farther North and South, by allowing for latitude.]

Farm.

How to economise time and labor and to accomplish most during the present month, is the farmer's study. Many a farmer undertakes to do so much work himself that he breaks down under the pressure, while he should have spent part of his time in planning to make work go smoothly, to have no hurrying, no work to be done over again, and to have no body on the farm who interrupts the work of others, or is out of the way when wanted, or shirking his share of the tough jobs, and looking out for easy ones. The farmers of our country should remember that all prosperity, especially in this country, is dependent upon the products of the soil, and so use the whole fertility of the soil and the manure-heap to the best advantage, and with confidence in Him who giveth rain in due season, and ordereth the seed time and the harvest.

Beans will do pretty well on poor soils, but a great deal better on good. They run to tops if the ground has too much fresh manure, and are an excellent crop for clearing land of weeds. They are always marketable, valuable for home use, and for feeding to sheep. Plant white tonia varieties in drills 2½ feet apart. See article on p. 142.

Bees—A moderate apiary can be easily attended to with little expense and trouble, and with great profit. See directions given under "Apiary," on a subsequent page.

Birds—Spare them all; put up bird boxes. More than one or two compartments are undesirable. Kill cats that kill birds; allow no guns fired on or near the premises.

Bones—Collect from far and near with jealous care; pound them up or put them in with the horse manure.

Broom Corn—Plant late in the month, on good corn land in hills, 3 feet each way, or in drills 4 feet apart, thinning subsequently to 6 inches apart in the rows.

Buildings—Paint before hot weather comes on, if at all this season. Remove all litter from unused stalls and the bottom of bays, before it becomes a harbor for rats and mice and insects, which soon take possession when the premises are left undisturbed.

Calves—For weaning see Calendar for April; feed sweet hay after they begin to graze; castrate at 4 weeks old.

Carrots may still be sown; the earlier the better.

Cattle—Continue to fodder until there is abundance of grass. Keeping them a week out of the pasture now will be of great service to it before the end of the Summer. They will relish a little hay at night even after turned to pasture. Keep up the flow of milk by feeding cows with wet bran, shorts, and roots if any remain, until the pastures are in full growth. Feed grain to working cattle according to the severity of their labors. Potatoes or other roots once or twice a week will keep them in good, healthy working order.

Cranberries—This is the best month to set cranberries on wet land. Obtain good healthy plants from the swamp and plant them on skinned and burnt swamp land or on light moist upland, and keep clean.

Cellars—When the cellars are empty, clean them out in every nook and corner, and whitewash throughout, and stop rat holes with cement and broken glass.

Clover—Where winter grain is thin and back ward from any cause, clover and grass seed will catch if sown early.

Corn—Prepare the soil in *dry* weather early in the month, never work the ground when it is wet. The old rule of the Indians was, to plant when oak leaves are as large as a mouse's ear. If heavy greensward be broken up like Spring, do not cross-plow, and be careful not to disturb the sods in harrowing and marking out the ground. The fermenting sods will afford warmth and nutriment. Examine carefully and reject all imperfect seed. If wet and dried off with lime, smutting is prevented. See p. 142.

Dairy—The labors of the dairy are commonly more burdensome this month than any other. Plenty of rich milk, with good help, makes the work light.

Draining—Mark spots that need draining, and be prepared to put in the "crockery" or stones next Fall in good earnest; and improve drouths, at any season, to drain low swampy land.

Flax and Hemp—Flax culture promises to become more remunerative in future, from recent improvements in preparing the fiber. Sow this and Hemp early.

Fences—Keep all in repair, particularly boundary and road fences, and around pasture lots where young cattle are confined. Good fences make quiet cattle. If they once become unruly, no ordinary fence will restrain them.

Grain Fields—A top dressing of plaster, nitrate of soda, or guano will often prove beneficial on both Winter and Spring grain. Guano, lime, or wood ashes, sown liberally before the seed is covered, will benefit heavy soils. Keep all stock from grain fields, and pull out weeds as soon as plainly visible before the grain is too large.

Grass Seed—May be still sown upon grain fields not already seeded, and on poor meadows. Use plenty of seed.

Hedge Rows thrive and spread by being let alone. Tear them out by the roots, not only along the fences, but by the roadsides to prevent further encroachment. If time can not be taken for this, turn a flock of sheep upon them to eat off the young sprouts as they appear, which will destroy some, and keep all in check.

Horses—Need, to keep them in good condition during Spring work, generous feed and thorough grooming. Collars, cart, and harness saddles should fit perfectly, and these are much better hard than soft. Soft pads induce sweating, and galls, if the skin be broken. A piece of hard leather, cut to fit the neck and shoulders under the collar, is a great relief to a tender skinned horse. Sponge the heads, shoulders and legs night and morning.

Horse-hoes—In all cases where hand hoeing can be dispensed with, and the work done by horse-power, do so. The tillage is commonly much more thorough, because oftener repeated and done at so much less expense.

Lime—Always apply it on land after plowing deeper than before, and upon the surface, for it works down. Keep a supply on hand for composting with weeds, sods, etc., 30 bushels to the acre, after plowing in other manure, is an excellent preparation for corn.

Lucerne—This clover rarely succeeds north of latitude 41°. It requires deep soil with open subsoil, on which it thrives year after year without renewal, and furnishes valuable feed, particularly for soiling, as it can be cut several times in a season. Use 10 to 12 quarts per acre, and sow early, best in drills 2 feet apart, and keep clean.

Mangel Wurtzel—A most valuable root for stock. Sow first to middle of May, on good strong deeply tilled land, 4 inches apart in rows 2 feet apart, bury the seed an inch deep, one seed in a place, if you can trust the seed; where seed fails, plant by transplanting.

Manures—Corn is a gross feeder, and should be well supplied with all that can be profitably used. The effects of heavy manuring on hoed crops will be visible years after, in the oats, winter grain, and grass which follow. Buy manure only as a last resort, after all available supplies on the farm are exhausted. Bone dust, and Peruvian guano, where a good article can be obtained, cotton-seed oil-cake, castor pomace, and beef scraps, (the first two ready for immediate application, the rest requiring composting a few days with soil,) may often be bought and used to advantage. For grass or grain fields the Peruvian guano, nitrate of soda, or sulphate of ammonia if obtainable, applied in solution, are best. See article on Concentrated Manures, page 138.

Mowings—Allow no grazing in Spring, top-dress with fine compost before the grass has advanced much, or apply guano, ashes, or plaster, early this month if needed. Keep the wash channels open from the road, and arrange them to distribute the water over a wide space. See p. 138.

Oats—A crop may sometimes be got if sowed late, but they do not fill well. If the ground is in perfect order and you can put on nothing else conveniently, sow oats about the first of this month; but if rains come on, devote the land to some other crop. If your object is to seed down to grass, sow any time this month, and cut the oats for hay.

Onions—See Calendar of Operations for April.

Peas for feeding out may be sown early in the month. A low growing variety put in with oats, will be partially supported by the grain, and both will yield a good crop in a favorable season.

Parsnips—Afford a valuable feed for milch stock; should be sowed about the middle of May rather shallow, in drills 2 feet apart. Parsneps make lighter drafts upon the soil than any other root crop, except onions, but delight in a deeply worked light rich soil.

Plowing—Lay out long lands, and avoid curved furrows. Whenever practicable follow with the subsoil plow. There is no other good preparation for deepening the soil by subsequent plowings, and it is a great preventive of injury from drouth.

Potatoes—Plant early in drills 3 feet apart, use no heating manure, but well rotted compost, ashes, etc.

Poultry—If confined, keep up their lay ing by liberal feed of grain, boiled potatoes, and frequently some chopped meat, and grass or other green food. Allow them to leave their yard an hour or two before sundown, when they will not do much injury by scratching in the garden, etc. Hens with chicks should be confined in portable coops and chickens allowed to roam in the garden and fruit yard until they begin to scratch badly; they will destroy many insects. Feed young poultry with cracked corn instead of meal, increasing the size as they grow older, until they can manage whole corn. Milk curds are very wholesome food for them. Turkeys ought not to be set before this month, and when hatched the young birds must be housed in a dry shed, and not allowed to get wet by dew or rain for several days.

Provisions—Pork in barrels in the cellar, hams in the smoke-house, and other provisions, need looking after occasionally. Add salt to the brine if it needs it and see that it covers the meat. Hams sewed in thin muslin bags and whitewashed, will rarely be troubled by the fly. Keep them dry and cool.

Pumpkins—Cheese pumpkins are probably the best variety for cooking. Keep them separate from other vines of the same family. See article on page 142.

Root Crops—Carrots, see Calendar for April,—Ruta bagas, sow middle of June.—Parsneps, Mangels, and Sugar beets, see elsewhere in Calendar.

Sheep—Shear early without washing unless the sacri fice on the wool will be too great. Shear scabby sheep and dip in a strong decoction of tobacco, scrubbing them with a brush; watch the first symptoms of foot rot, and if it shows itself at all, after driving the sheep through shal low water or wet grass, to wash their feet, drive them all through a narrow passage in which a long trough is placed, holding a concentrated solution of blue vitriol, quite warm, in which they must take several steps. See article on page 137.

Soiling—Winter rye is earliest ready for the scythe, then oats and peas sown early and repeatedly, later clo ver, and for the same purpose successive crops of corn sowed broad cast or in drills. The evergreen sweet corn is one of the best varieties for this purpose, though the common western or southern do well. Sorghum, Egyptian millet and common millet, and Hungarian grass, are all good summer soiling crops.

Sugar—The uniformly good returns received from a cultivation of this plant and manufacturing syrup and sugar when judiciously conducted, particularly at the West, stimulate its extended culture. Procure seed only from reliable sources—inferior sorts have caused much disappointment. Prepare the ground, plant and cultivate as for corn. See page 139.

Sugar Beets—Cultivate like mangel wurtzel in all respects, to which it is superior as food for milch cows.

Swine—Give to sows with litters plenty of nourishing food. The best pork is obtained from pigs kept fat and growing rapidly from first to last. If bran, shorts, or meal be given, mix with sour milk, or water, and allow it to ferment before offered for feeding out. Connected, a steaming apparatus should be attached to every establishment where many swine or other animals are fattened.

Tobacco—Weed plants in the seed bed, and water with liquid manure, dung-heap leaching diluted, sheep-dung water, or guano water. Follow directions in articles on Tobacco in this and other numbers.

Tools, machines, harness, etc. To keep all in perfect order is employment for the many rainy days common in this month. Examine well and procure the best mowing machine before the grass is suffering for want of cutting. A farmer should be acquainted with the merits of as many of the new implements as possible. Oil harnesses after they have been wet, and before they dry.

Orchard and Nursery.

Fruit trees should have been transplanted in this lati tude, by the middle of April. At the north, late growing sorts may still be set out, and if neglected until now, they may be planted even now, in this latitude. Care will be necessary not to rub off the growing buds, and the roots must not be exposed to drying winds. Mulch the ground around late planted trees to guard against a drouth before the roots have taken hold of the soil. Cut back a good portion of the previous season's growth to infuse vigor in the remaining branches. A lagging tree either established or newly planted, will often push into a new and healthy growth by a severe heading back. See page 145.

Seedling stocks should all be planted out at the earliest moment, if still heeled in. Successful planting frequent ly depends very much upon the time of setting out. The soil is usually always good after the winter rains and snows, and if planted at that time the stocks or trees become established before the drouth which usually occurs the last of May, or first of June sets in.

May is emphatically the evergreen planting month, and the nurserymen are busy in taking up and sending away pines, spruces, hemlocks, firs, arbor vitæ, etc. So well do they understand the difficulty of successfully trans planting native evergreens from the forest, or open pas ture even, with their coarse fiberless roots, that most of our common trees are now raised from seed in the nur sery, or at least taken from the pasture while quite small and set in the nursery rows to form a mass of fibrous roots. They are frequently transplanted two or three times before they are finally sold, or in lieu of this they are dug about and the tap root cut, to induce side roots

and fibers. Even those grown with the most care, require some attention in their removal than deciduous trees. The roots should not be exposed to the sun or drying winds, and with some kinds, such as the broad leafed rhododendron and laurel, it is safest to remove the tree or shrub with a ball of earth attached. The same may be said of trees taken from the woods or pastures. Wet the ground thoroughly, dig carefully, and having secured all the roots possible, with the earth attached, slip a gunny bag or other stout cloth under the mass and tie the corners up about the trunk. Move it carefully and set at once, filling in a little peaty soil about the roots, if possible. If a favorite pasture or road-side tree is wanted in the lawn, commence upon it this Spring, digging about and severing some of the larger roots, but not too many of them. Fill in with fine soil and leave the tree to form new fibers during the season. The tree may be moved the succeeding Spring, to ensure against the liability of failure, the remainder of the principal roots may be cut the following Spring, and left for another season's growth.

In exposed situations and especially in prairie regions, it is very advisable to shield the newly planted orchard from the prevailing winds. Plant a belt of evergreen and deciduous trees upon the north, east and west sides of the site intended for an orchard. Set the deciduous trees on the outside as a partial protection to the evergreens. In clearing up a forest, a belt of trees two or three rods in width, left to protect the orchard, will be very serviceable.

In the orchard there is little to do, if the directions given last month were fully carried out. A few grafts may still be put in the apple trees, provided the cions were cut in April or before, and have been well kept. Remove all brush, loose stones, and other rubbish from the orchard and if the ground has been a long time in sod turn it over lightly, previously adding manure. The only pruning now admissable is to remove decayed branches, and small shoots, thinning and heading back with the pruning knife.

Insects will begin to show themselves this month. Commence a vigorous assault upon them at once, before they have time to increase in numbers. A little work in the apple orchard will destroy many caterpillars' nests. Wash trunks of small trees with strong soap suds or potash water to remove scale. Give cherry and pear trees a sprinkling of oil soap solution, towards the close of the month, to kill slugs. Examine trunks of trees for borers.

Seedlings budded last season should be examined, and all shoots starting out about the bud rubbed off. Cut the stock to within two inches of the bud, unless already done.

Weeds will soon make their appearance in the nursery if not kept in check. The plow or horse-hoe will do most of the work, but the hand-hoe will also be needed to remove weeds in the rows. Use a short wifflетree, and pad the ends to prevent barking the trees.

Kitchen and Fruit Garden.

During last month most of the preparatory work of draining, manuring, and trenching, should have been done, many seeds sown, and some already beginning now to appear above ground. It is easy by a little extra care in protecting tender plants, as beans, melons, cucumbers, etc., to secure their ripening two or three weeks earlier than otherwise. Gauze covered frames will protect against quite severe frosts. Hand glasses are convenient and more effectual, but liable to scorch the plants. A pane of glass on four bricks answers a good purpose.—When rain has fallen after seeds have been sown, and the surface has dried rapidly, it will facilitate the appearance of the tender shoots, to gently loosen the crust above them, with care not to injure the growing plants. A loose surface is most favorable to growth under all circumstances, but the ground should be often stirred and the crust broken to admit air, warmth, and moisture to the soil below. Plan so as to have a succession of crops on the same soil—lettuce between the carrot and parsnep rows and among the hills of melons; cabbages among early potatoes, to stand after potatoes are dug, turnips after the peas and early beans, endives or celery to follow early crops in the same way.

Asparagus—Cut every shoot as it rises to sufficient hight for the table, by which means the season will be much prolonged. Be careful in cutting not to injure the young shoots below the surface.

Beans—Plant bush varieties early. The Princess, China and Valentine are earliest; Union, Rob Roy, Marrowfat, Large White Kidney, and Refugee, later. The Lima stands first among pole beans, but is late. The Dutch Caseknife, and Red Cranberry are earlier. Set poles before planting the hills, which should be raised an inch or two above the surrounding surface, and plant after the middle of the month. The Lima's are tenderest. Set the flat beans, eyes down, and shallow.

Beets for early use should now be up. They may still be sown. Sow for Summer, Early Bassano; for Winter use, Long Blood, or Blood Turnip, sowing in deep, mellow soil, in shallow drills, eighteen inches apart.

Borecole and Broccoli—Sow for late crops at any time after the middle of the month, and transplant ready grown plants to the open ground from the hot-beds.

Cabbage and Cauliflower—Sow for late use, and transplant from the hot-bed into rich mellow ground. Examine about the roots for the cut worm. Hoe former plantings frequently, in the morning when the dew is on.

Carrots may still be sown, though it should have been done earlier. See April Calendar.

Celery—Sow for main crop as directed last month.

Cistern—For large gardens, a capacious cistern to be filled from the roofs of adjacent buildings, is a great convenience. During drouth, a hose from a hydropult or garden engine may be introduced, and a thorough watering be given with little trouble.

Cold Frames—Remove any remaining plants as soon as there is no danger from frosts, and store the frames for another season. An occasional coat of paint and care in handling, will preserve them many years.

Corn—For family use plant sweet varieties at two or three different times during this month, and as many next, giving to each about equal space. For market plant once early in this month or in April even, and after the middle of May, make a planting once a week until the 4th of July. Darling's early sweet is a good variety, and the Evergreen sweet, a large growing late kind, but very good table corn. Some of the small eared New-England varieties are sweetest. Plant small varieties in north-and-south drills, 3½ feet apart, 3 kernels to the foot.

Cucumbers—Transplant those started in the house as directed last month. Plant seeds for a succeeding crop. Our practice is to make large hills and put in, at intervals of a few days, several rows of seed around the first planting, to attract insects which may escape other preventives. Superfluous plants are removed when the danger is over. One of the best preventives is cotton batting, a thin layer spread over the plants and pegged down.

Egg Plants—Transplant from the hot-bed into ground well enriched with warm fermenting manure, when the weather is warm and settled.

Fruit Trees—The main fruit yard should be separate from the kitchen garden, but dwarfs do well in it where their shade will fall on walks, or where it will do no harm. Dwarf pears thrive in the soil of a well tilled kitchen garden. It is not too late to do a good deal of transplanting of fruit trees, grapes, etc., if the buds have not started, and the trees are in good condition.

Hot-Beds—Remove all plants from them, paint and put away sashes and frames for another season.

Insects—Many are already on the alert. Whale oil soap, guano water, and hen-manure solutions are not only offensive to them, but give vigor to plants to resist attacks Covering with gauze frames, is almost a certain preventive.

Kohl Rabi—Sow and cultivate like cabbage; plants may be placed somewhat nearer together.

Kale—Green curled kale and other varieties may be sowed at this season, and treated like late varieties of cabbage. See April *Agriculturist*.

Lettuce—Transplant from hot-beds, and provide for a succession among hills of vines, etc. Set it in unoccupied places. Frequent watering with liquid manure and often hoeing will bring it to perfection.

Liquid Manure Tank—Every kitchen garden should be provided with some convenience for making a solution of manurial substances. It should be near a supply of water, be sunk in the ground, and tightly covered. A barrel or half hogshead in will do, but a tight box in which is a partition with holes at the bottom is better. Against the holes on one side is thrown a quantity of shavings kept in place by a few stones, then any kind of litter or manure. Upon this we may throw a few pounds of guano, or sheep, or hen manure, or sulphate of ammonia, and pouring on water it will percolate and come well strained through into the other side fit for use. It is most important that it be not applied too strong. Water at evening, not letting it touch the plants, unless they are infested with insects.

Manure—A supply for a large garden may be obtained by saving sink and chamber slops, and using the contents of the privy. Offensive substances are made inodorous by mixing with them plenty of muck, or by sprinkling liberally with sulphate of lime (plaster of Paris).

Melons—Musk, Canteloupe, Nutmeg, etc. Sow seeds as directed for cucumbers. The *seed* is worthless, and the flavor of the fruit injured, unless raised at a distance from other cucurbitous plants.

Nasturtiums—Sow where they will be shaded from the mid-day sun. They thrive best with plenty of moisture.

Okra—Sow in very rich soil, in shallow drills, 3 feet apart, and thin to a foot distant in the row.

Onions may still be sown. They do best several years on the same soil.

Peas—Sow for a succession of crops. The Champion of England variety is generally preferred for the main crop. A convenient method of supporting peas, is by means of stout cords stretched between stakes or posts at the ends of rows, supported in the middle if needed.

Peppers—Plant out from the hot-bed, eighteen inches apart, in rows two feet distant.

Potatoes—Plant at any time during the month, the earlier the better; late potatoes are of little use in the garden. The Dyckman, Ashleaf Kidney, Peach Blow, Wendell Seedling, and Dover, are excellent garden sorts. The last not early, but excellent. Hoe former plantings, and top-dress with ashes and plaster.

Pumpkins—Plant in hills eight feet apart, and at a distance from melons or squashes. Where different varieties of such vines are cultivated in the same enclosure, it is a good arrangement to surround each plot with several rows of peas, which will partially prevent their mixing.

Quinces—See article on page 145 of this number.

Radishes—Sow in vacant spaces, for a succession.

Rhubarb—Set roots or, if not supplied, sow seed. Hoe out all grass and weeds, and keep the surface loose. Pull leaves, removing only the stalks, and leaving the leaves for a mulch about the plants. Cut out the seed stalks as soon as they show themselves.

Salsafy—Sow on soil deeply worked, like carrots.

Seeds—Test before sowing largely. Set out roots or plants intended to furnish seeds for next year. Different varieties of the same species, as cabbages, turnips, etc., of various sorts, should be widely separated, to keep the seed pure. To get good squash or melon seed reserve spots in corn or potato fields far apart, for raising them.

Squashes—Treat like cucumbers and pumpkins.

Sweet Potatoes—Plant out when the weather is settled and warm, in deep, well pulverized soil, enriched with stable manure. Set plants from fifteen to eighteen inches apart in high ridges, or in hills, about three feet from center to center; set them obliquely and so that the stems of the lower leaves will be covered; they will then sprout again, if cut off by frost or worms.

Tomatoes—Transplant from the hot-bed into a well enriched sunny bed, 4 feet apart each way. A sandy soil is favorable. In setting the plants, place them a little deeper than they originally stood—they will throw out fibrous roots from the stem. Prepare a light inclined trellis to support the vines.

Turnips—Sow for Summer, hoe, weed, and thin others.

Winter Cherry (*Physalis*)—Plant out the same as tomatoes. Seed may still be sown, soaking it first.

Small Fruits.

Blackberries may be transplanted and succeed well any time before the buds swell for leafing out. Cut back well.

Cranberries—See note in Farm Calendar. They may be cultivated with good success in the garden.

Currants may be planted or moved, but at the sacrifice of the fruit if it be done after the buds have burst. Pruning to a single cane or stalk to each root, and this trained at an angle of 45°, and only very short spurs allowed to grow, is a system growing in favor.

Grape vines neglected in the proper season for pruning may be pruned as soon as the leaves appear, without danger of bleeding, and early in the month vines may be planted to good advantage, though better earlier.

Mulberry—This is suitable for an ornamental tree. Downing's everbearing is hardy and excellent.

Gooseberries—The Houghton does not mildew, and is therefore the best to plant. As soon as the leaves appear dust with sulphur.

Raspberries—Enrich the ground beneath and about them, by surface dressing. Cut out all feeble canes and winter-killed parts.

Strawberries—See notice of superior varieties offered as premiums. Set in good light, or well worked soil, water freely and frequently, giving a very little liquid manure in each watering. Bearing plants should be mulched with straw, tan-bark, lawn clippings, or coal-dust, to keep the berries out of the dirt. We prefer tan-bark.

Flower Garden and Lawn.

How apt are we all to regard as valuable and useful only, or chiefly, those things which minister to our bodily wants, or bring us some material profit. Why should the demands of the body and its comfort and enjoyment pull down the soul to its own gross level. Once supplied with food and clothing, let the mind have a free range, and the soul delight itself in beauty, and grow in the sunshine of nature, which is beautiful, often in proportion as it is of no other use.—If old beds are to be re-arranged, do it at once. In transplanting, disturb roots as little as possible. The frames, pits, houses and conservatories can be emptied in the course of the month, of all but stove plants. Most of them will do best, turned from the pots into the open border. Intersperse them among the bulbs, annuals

and late blooming perennials, where they will make an immediate show, and keep up a succession of bloom.

Amaryllis, one of the finest Autumn blooming bulbs, should be set early in a warm border.

Annuals—Sow in fine, well enriched warm soil. It is essential that a good variety of fine blooming annuals should now be put in, to keep up a show of flowers late in the season, after most of the perennials have cast their blossoms. Most of those sown in the houses to foward their growth, may now be transplanted to the open ground.

Bedding plants, as verbenas, petunias, salvias, heliotropes, Japan pinks, lantanas, pelargoniums, and others, may be readily obtained of the gardeners. The tender ones should be set out as soon as danger from frost is past. It is best to set each variety by itself, more or less.

Asters—Sow in open ground early, in various places, where they are to remain; later in the month transplant from hot-bed or frames. A few may still be started in boxes, if the ground be not ready—to transplant afterwards.

Biennials and Perennials—When it is desirable to increase the stock, remove a portion, and leave the remainder undisturbed.

Box Edging—Keep close clipped and low; reset if necessary as directed in April Calendar; renew weak or wintered-killed spots.

Bulbs—Keep well supported, and stretch a light awning over the choicest, to lengthen the period of bloom, removing at night and during cloudy weather. Set Autumn blooming varieties, as amaryllis, gladiolus, tuberose, lilies of various kinds, etc.

Carnations and Pinks may now be set out already in bloom. Tie to neat stakes. Divide old roots, and make layers to form new plants.

Cypress Vine, Morning Glory, and other annual climbers may be sown immediately and trained to strings around a central pole. Unsightly buildings, rough fences, etc., can be almost hidden beneath a mass of bloom, when covered with these climbers. Cypress vine seeds vegetate much more freely when soaked in tepid water for 12 hours before sowing.

Dahlias—Sprout them in boxes of earth, or by burying in a warm border previous to planting the last of May.

Evergreens—Delay planting until the last of the month after the trees have begun to grow, except arbor vitæ and Norway spruce. Keep the roots from the sun. Hollies, rhododendrons, and other broad leaved evergreens, do better when removed with a ball of earth attached.

Frames and Pits—Remove any remaining plants.

Flowering Shrubs—See Calendar for last month. Some are suready in bloom, or have cast their flowers; the later kinds may still be planted.

Gladiolus—Set the bulbs in a warm sunny place. Some of the newer varieties are very pretty.

Grass—Keep well trimmed and close clipped along the edges, using a line and sharp spade, or edging knife. New turfing may also be laid; keep well watered until rooted.

Gravel Walks should be kept free from weeds with the shuffle-hoe, and be well covered with clean, coarse gravel, and rolled.

Fancy Gourds—Sow early, and train upon fences, trellises, or old trees.

Hedges—Complete setting deciduous, and arbor vitæ, early, other evergreens later. Clip any not attended to last month.

Honeysuckles, Wistarias, Ivy, Ampelopsis, Bignonias, Clematis and other perennial climbers—Set at once, if neglected until now. Arrange on trellises or lattice work. Sow seeds and make layers.

Insects—It will be much easier to keep them in check if they are combated upon their first approach.

Lawns will need mowing, and should be cut frequently and evenly. A good, cheap, lawn mower is needed.

Lupins—Sow early and give plenty of room.

Mulching is beneficial to newly planted trees and shrubs. Lawn clippings are excellent.

Pruning—Prune with reference to habit and manner of blooming; the knife may be used freely at all seasons, if used with discretion. Shrubbery needs to be kept dense to look well. Evergreens should branch quite down to the ground. Their outer extremities may be cut back slightly, to make a dense growth.

Roses—Let the supply be large and varied, if space permit. The common June or garden roses must yield to remontants, teas, and bourbons. Tie up pillar and climbing sorts, layering the old wood. Turn those in pots into the open border.

Shade Trees—It is not too late to plant if they have not leafed out. Some will bear moving even then.

Trellises and Upright Frames—Set if loosened by frost, renew if decayed, before vines and climbers are put out.

Tuberoses—Plant bulbs not potted, early in very warm good soil. See description given last month.

Green and Hot-Houses.

As few plants are retained under glass as possible, all that will bear the exposure, as soon as they are sufficiently hardened by free ventilation, are removed to the open ground. There is little fear of frost after the middle of this month. Roses and bedding plants are turned out of their pots. Keep all growing plants well watered and syringed. Plant out fuchsias in partial shade.

Pelargoniums—Cut back severely, and set out the prunings in masses. Oleanders, Myrtles, Oranges and Lemons, may be sunk in their pots or tubs—examine for scale bugs.

Grapery and Orchard-House.

Give good ventilation; syringe foliage, walls, and ground, freely and often. Thin out fruit if it is too thick. Go through thoroughly pinching in shoots wherever needed. Grapes require especial attention; mingle sulphur in the water we syringed with, and dust it upon both fruit and foliage. Abstain from syringing any fruit in bloom, and let bees have access if they will.

Apiary in May.

Prepared by M. Quinby—by request.

The weather during fruit blossoms, decides whether we have early or late swarms. Should the yield of honey be plentiful, *good* stocks will be prepared to throw off swarms the last of this month. But, should a scant supply be obtained through unfavorable weather, swarming would be put off indefinitely, and even second or third rate stocks may throw out the first swarms. It sometimes happens that strong colonies having a good supply of last year's honey, and gathering but little now, will consume it this month, rearing drones. They even make preparation for swarming—rearing queens so far as to seal them up. A dearth of honey nearly always occurs between fruit and clover blossoms. The drones are sacrificed to save the colony. The bees in such cases change their plans entirely. If they get honey almost immediately, it will take several weeks before they can again get into condition to swarm—providing another brood of drones and other preliminaries just lost. Stocks that were quite feeble in March, with light stores, that could not afford to rear a drone, and that used with economy what they had, will pass such season of scarcity without any suspension of breeding, and be ready for swarming first. This explains why poor stocks will occasionally turn out better than such as were best at beginning of Spring. Should a swarm issue during such a time of scarcity, it will need feeding, particularly if there should be cold wet weather. Some of the poorest colonies can not always be trusted to supply themselves at such times, and will need feeding also.

Swarming will not be general until white clover appears. Use for swarms no hives that have been recently painted. Have every thing in readiness for the swarms as they issue. When they have clustered, there should be no delay in getting them into the hive. The time lost in preparing a hive, and having the bees wait for it, often results in *their not* waiting. *Good luck* here, consists in getting all the swarm to enter the hive, carrying to the stand, shading from the hot sun, and raising the front side just a little, without delay.

Those who begin to rear Italian queens this month, will need a full colony of that kind. It will be hardly possible to procure a queen much before the first of June. A queen just introduced to a native colony, is just as good to breed queens from, as if she was in a hive of her own bees. To begin—after the preparations already suggested—the first thing, after a colony is sufficiently strong, is to introduce the frame with small frames into the center of the hive—described in Feb. *Agriculturist*—taking out an outside one, and moving the others outward to make room. The queen will soon deposit eggs in some of the small combs, when they are ready. Raise out the frame carefully—using smoke to keep the bees quiet—slip out one, put another in its place, and return to the hive. Fasten on the top of this with screws, or pieces of wire bent around a thin strip of wood projecting half an inch beyond the corner, by which to suspend it. Three such combs are needed, but only the middle one need have eggs. Have ready before hand about a quart of bees—in warm weather a less number will do—to introduce to this box, without a queen of course. Open a hole in the top of the box in which they are confined, and set the one with the comb properly adjusted over it in such a way that no bees will escape. Feed a little and keep shut up for two or three days. When bees can be procured at another yard a mile away, the shutting up is not important if set a little distance from any others. They usually construct three or four cells, and the first queen that matures will destroy all the others. To prevent this, about the tenth day take out the comb and cut off without injury all the queen cells but one; there may be given to other little colonies for maturing. The queen matures in twelve days after they are shut up, ordinarily, and will commence laying in eight more, when she may be introduced. It is found to be very hazardous to introduce an Italian queen to a colony of natives, sooner than a week after they have been deprived of their own. Let the stock be strong enough to divide, when half of the combs and bees may be put into an empty hive adding frames to fill each. Set two feet apart, each a foot from the old stand; the one that is like to get the most bees may be put further off. In a day or two, the half without a queen, will begin royal cells; and of course the other hive is the place to look for the old queen, which may be destroyed. In eight days look over the combs again minutely, and cut off *every queen cell*—success depends upon it. The queen now to be introduced, may be enclosed in a tumbler, with two or three bees as attendants, and secured with wire cloth. Remove the honey board—the board over the frames—and invert the tumbler directly on the frames where the bees are thickest; set over the cover two boxes, to keep them warm. In the course of twelve hours, the bees and queen will become sufficiently acquainted through the wire cloth to be allowed together. Take off the tumbler carefully without disturbing the bees, set on the cover again, when she will quietly go down into the hive, and commence depositing eggs at once. This is the whole process. The Italian seem to work more readily in this way than the natives. I think it quite probable that this mode of propagating queens artificially, will yet be generally adopted. The introduction of a mature fertile queen to a colony two weeks sooner than when they swarm naturally, is an advantage sufficient to pay for extra trouble. The time gained in breeding, is equivalent to a swarm.

Grape-Growers' Maxims.

BY A. S. FULLER.

1—Prepare ground in the Fall, plant in Spring.

2—Give the vine plenty of manure, old and well decomposed; for fresh manure excites growth, but does not mature it.

3—Luxuriant growth does not always ensure fruit.

4—Dig deep, but plant shallow.

5—Young vines produce beautiful fruit, but old vines produce the richest.

6—Prune in the Autumn to promote growth; but in the Spring to ensure fruitfulness.

7—Plant your vines before you put up trellises.

8—Vines, like soldiers, should have *good arms.*

9—Prune spurs to one well developed bud, for the nearer the old wood the higher flavored the fruit.

10—Those who prune long must soon climb.

11—Vine *leaves* love the sun; the *fruit*, the shade.

12—Every leaf has a bud at its base, and either a bunch of fruit or a tendril opposite to it.

13—A tendril is an abortive fruit bunch—a bunch of fruit is productive tendril.

14—A bunch of grapes without a healthy leaf opposite, is like a ship at sea without a rudder—it can't come to *port.*

15—Laterals* are like politicians; if not often checked they are the worst of thieves.

16—Good grapes are like gold; no one has enough.

17—The earliest grape will keep the longest; for that which is fully matured is easily preserved.

18—Grape eaters are long livers.

19—Hybrids are not always high-bred.

20—He who buys the *new* and *untried* varieties should remember that the seller's maxim is *Caveat emptor.*—Let the buyer look out for himself.

* Laterals are shoots which start from either side of the main bud, at the axil of every leaf; if they grow unchecked they destroy its vigor; if entirely removed, the bud itself shoots prematurely.

Training Tomatoes.—A correspondent writes to the *American Agriculturist:* It is poor policy to set them in rich soil; let it be of just moderate fertility. Give them the warmest part of the garden; set small pieces of bush around them until they have grown eighteen inches or so high, then drive in notched stakes along side of the rows, say about two feet high, and on these notches lay poles—bean poles will answer—on each side of the rows; as soon as the vines are high enough lay them on these poles, this will expose them to sun and air and keep the fruit clean. The tomato may be trained, also, like a grape vine, on a low trellis or sunny wall; the yield of fruit is enormous, and on a warm wall the first frost will do no real injury.

Containing a great variety of Items, including many good Hints and Suggestions which we give in small type and condensed form for want of space elsewhere.

The General Premiums Still Good. For want of room we omit the list of General Premiums. They can be found on pages 122 of last month, page 90 (March), and in full on page 27, (January). We invite all our friends to continue their kind efforts to promote the circulation of this journal.

Crop Reports—Blanks.—On or before April 23d, Blank Forms were mailed to all whose names and addresses had been received up to that date, and we are continuing to send these blanks to other names that come in from day to day. These blanks should be received by the first of May. If there are any failures or losses by mail, please inform us promptly. The sheets contain separate blank forms for five montnly reports, beginning with May 10, on which day the first report should be *mailed*. In order to be inserted in the June *Agriculturist*. We shall be glad to have many more names of those who will assist in this public enterprise, especially from localities in the great corn and grain growing regions of the middle and western States, not yet represented. We are thankful in behalf of the country for the interest already manifested. In many places, Farmers' Societies, and Clubs, have taken hold of the matter with spirit, appointing competent reporters to receive the blanks, and promising constant co-operation on the part of the officers and members. In several instances the President or Secretary of a County Society has been appointed, and he in turn has chosen assistant reporters in each town in the county—a capital idea. We have devised a system of numbers, which will convey a great amount of information in regard to the breadth and condition of the crops, in a very small space. Our next paper will show the method and its results.

Interesting War Maps, are spare room on pages 153, 156 and 157. We could hardly spare room for them, but in these times we cheerfully respond to the general wish of our readers, so fully expressed in letters.

Missing Seeds, etc.—The call for Seeds has been so unexpectedly and unprecedentedly great, that many kinds, though laid in largely, have run out entirely, and could not be replaced. The run upon particular kinds has been very great. Take No. 183, for example. We had all the seed from a quarter acre of our own production, and at first sent out good sized parcels; then the demand increased, and we lessened the amount of seed to each; then we bought all the extra seed we could, and yet run short. The same may be said of Nos. 168, 202, 207, 208, etc. Some parcels have doubtless been lost by mail—we hope not many, for they have cost us trouble and expense enough to have them all go safely. We have certainly spared no pains to do all we promised and more, and to satisfy every subscriber. See "Defective Seed Envelopes" in another column.

The Strawberry Premiums offered last month are still good, and will be up to May 10th. We limit the time, as it will not be absolutely safe to send plants by mail at a later date. We are now sending out many thousands of plants each week, but shall doubtless have enough for all who apply for the premiums during the time specified. Our plants are very fine; they were *grown* by A. S. Fuller, in his nursery grounds on Myrtle Avenue, Brooklyn, L. I., and he is so sure of their superior quality that he is quite willing to join us in guaranteeing their excellence.

A Strawberry Show is announced on page 160, to which attention is invited. The occasion will doubtless be one of much interest, and useful information will be brought out. All who have good strawberries to show, and those who like to see them, are invited.

See the good Advertisements, on pages 155, 158 and 159. They were necessarily divided by the maps, which could only be printed on one side of the sheet.

Central Park Conservatory.—We understand that the Central Park Commissioners have made an agreement with Parsons & Co., of Flushing, by which they secure to the City a constant exhibition of the finest exotic plants in a large show house, or conservatory, to be erected on the Park near Fifth Avenue, and in return for their expenditure for this purpose, and their annual payment of a specified sum to the Park, have granted them a license to sell cut flowers and plants in pots. The Conservatory will probably cost fifteen thousand dollars, and is to be built two stories high. The upper story will be on a level with and adjoining Fifth Avenue, and will be built on brick arches and iron beams. Its size will be 160 feet long, and 40 feet wide. This will be the principal show-room, and will be filled with the most beautiful flowering and foliage plants, growing in the soil, while the finest exotic vines will cover the roof and columns. The rooms below and on a level with the Park, will consist of a Camellia-house, 40 by 60 feet, a Fernery; 40 by 60 feet; and two large rooms 48 by 60 feet each, to be used as sales-rooms. Smaller rooms in the rear will be occupied for making bouquets, for offices, and for a horticultural library to which all visitors will have access. It is designed to have exhibitions of single classes of plants, as Geraniums, Fuchsias, etc., of which large quantities are to be grown at Flushing, or by other florists who incline to send good plants there for sale on commission. We look upon this enterprise with great interest because it will make our citizens familiar with the finest plants, and educate their taste. Florists generally will be benefitted also, as the improved taste will greatly increase the demand for flowers and plants. The Central Park Commissioners have doubtless done a good thing for the public.

Planting Strawberries.—To several inquirers. The best time to make new beds for fruiting, is in August and September, using the well rooted new plants from the runners of this year. If set early in autumn they will bear well next season. Plants set out in the Spring get well established, and if on good, rich soil, send out abundant runners which take root at the joints, producing new shoots. If to be made the most of, put them at least two, or better three, feet apart; turn the runners so that they will not interfere; and when needed, fasten the joints loosely to the ground with a very small forked branch. Nearly or quite every joint so pinned down will take a root. A bit of earth, or a pebble will answer to hold the joints down.

Adirondac Grape—Correction.—In speaking of this grape, page 117, April *Agriculturist*, we said it was exhibited at Montreal, Canada, in *October*. The introducer, Mr. John W. Bailey, writes us that he showed it at Montreal on the 18th of September, *fully ripe*. He claims that it ripens four to five weeks earlier than the Isabella, and ten days before the Hartford Prolific. We know nothing as to its *quality*.

Royal Hort. Society (Eng.).—The great shows take place this year at "The Garden," South Kensington, London, on May 21st, June 11th, and July 2d. In October there is to be a show of fruits, roots, gourds and squashes, vegetables, and cereal grains, which is open to all countries. We hope that efficient means will be taken to make a show of American products in London. It may open an important market.

How Much Rain in a Year.—An interesting table prepared for the *Agriculturist* will be found on page 154. It will be seen that the fall of water, in the form of rain and melted snow, has for seven years past, averaged 50¾ inches per year, or sufficient to cover the whole surface with water to a depth of over 4 feet. The least fall was in 1856, not quite 43 inches. The greatest fall was in 1858-9, being over 56 inches (56.16). The fall for the year ending March 1st, 1863, was nearly 56 inches (55.97). The mean fall for seven years by seasons was: Winter months 12.29 inches; Spring 13.16 inches; Summer, 12.87 inches; and Autumn, 12.18 inches—showing no great difference in the mean fall for the different seasons. The largest fall in any month, in June, 1857, being over 18 inches, (18.09)—an inch for every five days.

The "Cheap Watch" Humbug.—Messrs. "Bostwick, Tiffany & Co."—Just as the April *Agriculturist* went to press, we began to receive letters of inquiry and remittances of money, from $8 to $20 each, to be invested in watches offered wonderfully cheap by "Bostwick, Tiffany & Co., New York." On referring to the advertisement in the *Weekly Tribune*, we found that, under the above name, some party, (perhaps the "Sands of Life" man, or the Rev. Wilson, or one of that ilk,) had assumed, in part, the name of the old well-known dealers, Tiffany & Co., and with much pretence of hard times, offered watches at "ruinously low prices." The advertisement itself was sufficient evidence to us that it was a swindle. We first wrote a letter, in a friend's name, stating that we had $20 sent us to invest in a watch, and asked Messrs. "Bostwick, Tiffany & Co.," (so-called) *where* we should bring the money. The reply was, that all the watches were sold out, and their establishment was about being moved to Philadelphia, where any communication would reach them. We next called personally upon Mayor Opdyke, who promptly seconded our efforts to stop the swindle. He dispatched Capt. Silvey, of the Metropolitan Police, ordering him to arrest whoever should call at the Post Office for letters for "Bostwick, Tiffany & Co." The next day we received a note from the Mayor, stating that Capt. S. had arrested the swindler and found upon him $400. There being none of the actually swindled persons here to enter formal complaint, the villain could not be held, and is now doubtless engaged in some other scheme under another name. We returned all the money chancing to be entrusted to our care. As a single mail brought him $400, probably he collected thousands of dollars, and would have got many thousands more had we not stepped in to stop his career. MORAL—When anybody offers to sell you two dollars worth of silver or gold for one dollar of the same metal, set him down as a humbug, a thief in disguise.

Instruction about Fruits and their Management.—The best general work on this subject is doubtless "Downing's Fruits and Fruit Trees of America." It names all the best fruits and gives a description of each—figuring many of them—and gives ample directions for their culture. It contains 560 octavo pages and costs $1.75, sent post-paid by mail, or otherwise.

"Hints to Horse Keepers."—("J. W." New Haven, Conn.) This book is what its simple title purports, and a great deal more than one would suppose. Henry William Herbert (Frank Forrester), we may almost say, made a life study of horses, and this book is a compendium of much valuable experience, and most enlightened views. It is fully illustrated, contains 425 pages, and is emphatically a good *hand-book* for horse-men. (Price $1.25. The same if sent by mail post-paid.

Book on Gardening for Ladies and Beginners.—"Julia," Cook Co., Ill. We know of no book better adapted to a novice, than Mrs. Loudon's "Ladies' Companion in the Flower Garden," edited by A. J. Downing. It does not contain *all* the new plants and flowers, for it is several years old, but is full of correct and practical information. It is an octavo of 430 pages, the descriptive part double columned, and well illustrated. (Price sent by mail, $1.50.)

A Pleasant Fertilizer for Garden Plants.—Many persons, particularly ladies, dislike to use the ordinary fertilizers from the barn or poultry yard, on flowers and other house-plants. "One who knows" sends the following for the *Agriculturist*, which is good not only to stimulate house-plants, but for out-door plants of almost every kind. Dissolve ½ to ¾ ounce of sulphate of ammonia, (obtained cheaply at the druggists) in one gallon of water. Apply it only once a week, and then only to growing plants. It may be used with great benefit on beds of strawberries, on peas, on dwarf pears, grape vines, dahlias, and for all kinds of pot-plants. This mixture increases the size of the foliage of plants, and gives a dark, shining green color. The flowers also are improved in proportion. And, not least important, this fertilizer will do no harm.

Six Good Dwarf Pears.—A good judge, in Central New-York, recommends: Duchesse d'Angoulemc, Louise Bonne de Jersey, Beurre d'Amanlis, Urbaniste, Beurre Diel, and Vicar of Winkfield.

Defective Seed Envelopes.—As stated in the last *Agriculturist*, page 101, a large number of applications for seeds have been made, in which the subscribers failed to follow the directions given in connection with the list. This has been done accidentally, no doubt—perhaps carelessly in some cases—but that will not prevent their alotting the blame to us. Indeed, we have had a few severe letters from those whose envelopes are on hand, but not defective to be used. We have paid many dollars of postage on letters having the old stamps or none at all, while many subscribers have put on three cent stamps where one cent would have answered. We have on hand many of these defective envelopes. Here are a few which are without the P. O., or without the list of seeds desired—other envelopes lack any address, though they have the seed lists: *Vermont:* W. S. Grow. *Rhode Island:* A. Aldrich. *Connecticut:* W. A. Hyde. *Massachusetts:* G. H. Dyer, H. R. Storer, C. Gardiner, S. Green. *New York:* T. Pierson, L. M. Chambers, S. Fordham, J. A. Pain, F. W. Smith, L. Weirich, J. Tongue, G. Jarrold, A. E. Dayo, A. Matson, O. Reed, A. M. Hitchcock, S. F. Roberts. *New Jersey:* R. T. Abbott, C. W. Moore. *Pennsylvania:* J. Richardson, G. Grier, L. C. Troutman, W. House, D. Datweiler, N. Haughy, A. J. Watson, H. Broman. *Illinois:* P. Conner, H. Baars, J. W. Coventry, V. K. Dayo, C. G. J. Hughsone. *Wisconsin:* H. B. Lee, E. Kendley. *Indiana:* T. B. Graham, R. R. Kofel, J. P. Clough, H. Matthews, I. Henley. *Ohio:* S. Phelps, A. Branden, D. Farnas, W. Negley, P. S. Bull, N. H. Townsend. *Iowa:* S. O. Crandall, J. M. Chapman, S. S. Eagan. *Michigan:* I. J. Carver, D. C. Higbee, L. E. Ferguson. *Kansas;* D. R. Brees, S. Ogden, D. R. Overly, M. A. Bunch. *Minnesota:* J. V. Dugan. *Delaware:* W. C. Mitchell. *Maryland:* D. A. Price. No State or Post Office given: A. Weaver, J. B. Brooks, R. F. Rollins, B. F. Bullis, S. S. Rector. Dr. Gilmore. Many others are otherwise defective. If the above will send in a list of ten to fifteen numbers to select from, with full address, we may yet be able to supply four or five parcels each.

Vitality of Seeds.—Nearly all seeds retain their vitality more than one year; some are good for twenty. But the old story of the mummy-wheat is beginning to be discredited. It depends very much on the way seeds are gathered and preserved. They should be collected just at the point of full ripeness, not after, then laid away to dry. At leisure, they may be rubbed out, sifted, and put away in paper bags, labelling them at the time. They should be kept in a dry place and at an even temperature. Before planting, throw your seeds into a dish of water; those which float are generally worthless—not always. A surer way is to try to sprout them in boxes of earth before planting. Those whose tested portions do not germinate may be thrown away.

Treatment of the Amaryllis.—"Reader," Hampden, Me. The Amaryllis requires a period of rest after blooming, or after the new growth which follows blooming. Set the pots in a dry portion of the house, and give very little water for 2 or 3 months.

Flowers and Ruta-Bagas.—"Jane." You mistake, if you think a man can not be interested in the useful and the beautiful at the same time. We hope your lover will have an eye to both. Look at the example of sturdy Wm. Cobbett, the author of the "American Gardener," who first introduced the ruta-baga turnip into this country, and cultivated it with great zeal and success. This plain man wrote thus: "For my part, as a thing to keep, not to sell, as a thing the possession of which is to give me pleasure, I hesitate not a moment to prefer a fine carnation plant to a gold watch set with diamonds." Please, Jane, don't sneer at plain men, again.

Propagating the Daphne Mazereon.—T. Farrar, Kenosha Co., Wis. This is a pretty flowering shrub, blooming very early in Spring, before the leaves appear, and on this account it is better to transplant it in the Fall. Increase the stock by cuttings, layers, and by division of the roots. Propagators succeed well with cuttings, making them in the Fall, and burying them in sand in the cellar, until April, when they are planted out in a light, deeply worked soil.

Chinese Grass-Cloth Plant (*Urtica nivea.*)—Mrs. Jane O'Brien, Allegany Co., Pa.: This plant belongs to the nettle family. It is an herbaceous perennial plant, growing about six feet high, and flourishes best in a moist peat soil. We do not know whether it will succeed in the Northern States or not. Will some one who has tried it please answer? The Rice Paper-plant belongs to the Leguminous or Pea family; its botanical name is *Sesechynmene paludosa*. This will not succeed in the Northern States.

Black Pepper.—"N. T. S.", Waldo Co., Me. The *piper nigrum* of commerce is a berry growing on a climbing perennial plant in the East Indies, and is too tender for this climate. Quite likely it might be cultivated at the far South. The *white* pepper is made from the same berry after removing the dark outside surface.

Leathery Fungus.—W. H. Woodward, Marathon Co., Wis. The curious piece of "vegetable buckskin" you send is a fungus growth, analogous to "spunk" used for tinder. The resemblance to sheep skin or buckskin in color, texture, and *odor*, is very marked.

Orchard Hedge.—S. B. Shaw, Ionia Co., Mich. Honey Locust, (*Gleditschia triacanthus,*) makes the best hedge to fence out trespassers. Boys, cattle, and other stock can not well penetrate through the long, strong, and sharp thorns. Plant in single rows, two feet apart, and cut back to within a few inches of the ground to establish a bush form. It will need frequent shearing.

Osage Orange Seed.—Several inquirers. Most of this seed comes from Texas, and owing to the suspension of intercourse with the South, no seed of last season's growth has come to this market. Thorburn of this city has some old seed, a portion of which will doubtless grow. Price 75 cts. per quart.

To Propagate the Holly.—W. R. Robbins, Suffolk Co., N. Y. The holly is not easily propagated. It rarely grows from layers or cuttings, and the seed often lies in the ground one or even two years before vegetating. Meehan advises to mix the seed with sand, and leave for one year, when the whole should be sown. Transplant when one year old, and once or twice afterwards, before their final setting out in May.

Apples in Cold Climates.—G. Y. Armstrong, Canada East. Surrounding the orchard with a belt of evergreens will be very beneficial in cold climates. Evergreens are sometimes set out in clumps in various places in the orchard itself. Plant only the hardy varieties of apples, such as Pomme Gris, Canadian Reinette, Roxbury Russet, Talman's Sweeting, St. Lawrance, Bourrassa, Danvers' Winter Sweet, Fameuse or Snow Apple, Ribstone Pippin, Rhode Island Greening, Red Astrachan, etc. We have named them in the order of hardiness; the last named is one of the best apples.

Wash for Fruit Trees.—L. T. Robbins, Plymouth Co., Mass., has used the following wash on his fruit trees for 20 years, and to good satisfaction, applying it early in June. Take equal parts of soft soap, clay and fresh cow manure, mix with water to a convenient thickness and apply with a stiff broom or brush. With a stiff corn broom he coats the large limbs as far as he can reach.

Field Beans for a crop in Young Orchards.—There is none better. Plant in hills or drills—if in hills 30 inches one way and 15 the other; if in drills, 30 inches apart and about 6 beans to the foot. The quality of the soil should decide in the manner of planting, if it be capable of producing a large crop, plant in drills. The Marrowfat field bean (white), or the common white bean are the advisable sorts. The former has a little tendency to run if strong manure has been applied.

Raspberries Failing to Send up New Canes.—A. Allen, Clinton Co., O. The principal cause of failure was allowing the enfeebled canes to ripen fruit the season of transplanting, after a long journey. The canes should have been cut down to 10 or 15 inches of the ground, when they would probably have thrown up new shoots.

Strawberries — Hermaphrodites Prolific.—F. M. Giddings, Ashtabula Co., O. It was formerly supposed that only pistillates were really productive, and a few nurserymen, like the one you refer to, still maintain that hermaphrodites can not bear abundantly. The Wilson, Austin, Hooker, Longworth's Prolific, Triomphe de Gand, Bartlett, Downer's Prolific, etc., all perfect varieties, entirely upset this theory.

Strawberries with Dwarf Pears.—W. J. Moore, Boyle Co., Ky. Your plan of planting strawberry beds between the rows of dwarf pears will answer very well for a time, if on good, rich soil. For list of desirable sorts see February *Agriculturist*, page 36.

White Turnip.—W. W. Johnson, Penobscot Co., Me. The white turnip you speak of as a good keeper, in shape and appearance like the rutabaga, is probably the Long White French, which we are distributing as a valuable sort.

Hybrid Turnip Seed.—"C. A. W." Hudson, N. H., writes: A carrot was set near a turnip of the round flat English variety. The turnip seed thus raised produced a crop, part of which were white as usual, and a part deeply tinged with orange. Had the carrot any thing to do with this? ..No. Some other kind of turnip grew within a few feet or rods.

To Keep Black Fly or Flea from Cabbages.—Sift on lime while the dew is on; sift on plaster, or flour and black pepper mixed, or ashes, or snuff; or strew tobacco stems through the field; or boil the stems, and sprinkle on the water; all these are recommended, and we have tried some of them with partial success, but hardly know which to recommend.

Sweet Potato Plants by Mail.—H. A. Lamb, Worcester Co., Mass. It is cheaper to send small parcels by mail, and they will go safely, if well put up. The expense of sending by mail is 1 cent per ounce. No more than 8 ounces can go in a single package.

Horse Beans.—S. B. Luckett, Wayne Co., Iowa. The horse bean is much used for stock food in England, where it flourishes finely. The seasons are too warm and dry for them in this country.

Sorghum Sugar Refinery.—Lathrop & Smith, of Oswego, N. Y., propose to put up an expensive sorghum sugar mill and refinery, if they can get a pledge that 800 acres of the sorghum will be planted this season in their vicinity. The refinery will cost $60,000 to $75,000, and preparations already made indicate that the 800 acres will be planted, and much more besides.

Good Lawn Grass.—The Kentucky Blue Grass, referred to in the October *Agriculturist*, page 292, appears all right. To-day (April 19) it presents a uniform green mat, while the Italian Perennial Rye Grass, near by, looks brown and much killed. We feel paid for waiting the slow—all Summer—starting of the Blue Grass. It will stand frost. One kind of grass, thinly sown, makes a prettier lawn or yard than any mixture can do.

Top Dressing for Pastures.—Bonedust and guano put on after giving the land a light scratching with a harrow, and then rolled in if practicable, or sowed on and left to itself, is a good dressing. Use per acre, 5 to 10 bushels of bone-dust, and 150 to 250 lbs. of Peruvian guano, *known* to be pure. On lands benefited by plaster, use it in such quantity as experience proves best in any neighborhood—from 250 lbs. to 500 lbs. to the acre. Unleached ashes are often capable of renovating pastures for a length of time. A single dressing showing marked effects after six or eight years. The quantity to be applied varies also greatly (from 10 to 30 bushels), and none can advise with accuracy; on light lands use less than on heavy clays.

Salt for Chimneys.—The *Allg. Deutscher Telegraph* says that chimneys built with mortar containing salt will require no sweeping, and be free from danger of catching on fire. An instance is given of a chimney thus built thirty years ago, which has never needed cleaning, and has never burned out. It is claimed that the salt gradually dissolves in damp weather, and carries the soot as it runs down. This may answer where wood is burned, but from coal fires the ashes or "soot" consists mainly of fine dry ashes, which would not be affected by the salt, even supposo enough of it would flow from the morter to dissolve anything.

Weeds and Dirt.—Johnson's definition of dirt, is "matter out of place," which is broad, and perhaps accurate enough. To weeds have been applied a similar definition, viz.: "Plants growing out of place."

Silk Weed.—J. P. Cawley, Salem Co., N. J. The pod containing the delicate silky egret, or hairy down, is from the *Asclepias cornuti*, or milk weed. Attention has been directed to it for giving a silky gloss to fabrics, It is said with some success. It may answer some purposes, but the fiber is too tender for spinning, we judge.

Eradicating Alders.—Ed. West, Stafford Co., N. H. We have cleared the Black Alder (*Alnus incana,*) from swamp land by cutting off a few of the roots and winding a chain about the clump, near the roots, and hitching a strong pair of oxen to draw them out. Begin upon one side, and make clean work as you proceed. It can be done quite expeditiously.

Manurial Value.—P. H. Foster, a Long Island farmer, put us a hard question. "What is the actual value for manure of various substances, taking the price of a bushel of corn as a standard?" Let us take barn-yard manure. On Long Island, and throughout the Eastern States, it is called worth $1 for a load for a pair of cattle—that is 1 load=2 bushels of corn. In Illinois, manure is considered worth less than nothing in many places, and corn 10 to 20 cents per bushel. You see we can not compare them.

An Aged Hen.—"Subscriber," Carlisle Station, O., writes, that he has a Prussian hen raised by himself in 1841, which makes her 21 years old. She is of a clear white color, medium size, was a good layer and successful in raising one or two broods of chickens every season, until the past two or three years. She still exhibits a maternal care over the broods in general.—Is not this the oldest hen on record?

Poultry Experience.—"Hampton," of Holyoke, Mass., writes, that many years ago, while yet a boy, he began taking the *Agriculturist*, and derived many hints from it, which he has been practicing upon since he has grown up, and here is *one* of the results: For fourteen years he has kept poultry, and considers them the most profitable stock in his farm. They have seldom failed to give him fresh eggs daily through every Winter. They have a light room, with a window facing south, boards on one side, and laying boxes on the other. They have a box containing ashes and old mortar pounded fine, to roll in. When the ground is frozen, they consume finely broken oyster shells and bones freely. Their main food is corn and oats mixed, as much as they will eat, twice a day, with occasional change to scalded meal. Once in a week during Winter, when insects are inaccessible, the fowls receive a little fresh meat. With the above treatment they have kept in good condition, and 15 hens, have given 4 to 8 eggs a day during the entire Winter.

A Good Scare-Crow.—The various works of art which we annually see in corn-fields do not please the taste. The following is an old one. "Take corn, and string each kernel on a horse hair—white is best—tying a

good knot in it to prevent its slipping off. Scatter these enticements in various parts of the field where crows and black-birds are wont to alight. No crow will eat more than one or two kernels in that field or any other very soon. The two ends of a horse-hair sticking out of his mouth, well anchored in his mawe by a fine kernel of corn, will be nothing of a pleasure to him, and he and his company will leave for parts unknown."

Plans for Bird Houses.—(Charles.) No, Charley, we have none, in our portfolio. But you, or your father, or the carpenter, can contrive something suitable. The Indians, you know, hang up calabashes on the sides of their huts, or on trees close at hand, and the birds soon occupy them. Almost any kind of box will answer; the birds are not fastidious about styles of architecture. But if you can make a little house, resembling in its outlines the house you live in, it will show some skill and taste on your part. A neighbor of ours has made a little Gothic cottage, a miniature edition of his own residence, and the birds like it. Another man, near by, has lately made a sort of Chinese pagoda, an octagon about 18 inches high and ten broad, and set it up on the top of a pilar twenty feet high. The blue birds have already begun to make reconnoissances about it, and will ere long take full possession.

Pepper *versus* **Rats.**—A subscriber recommends to fill the holes of rats with colored cotton sprinkled with pepper.—*Query*: Do rats dislike pepper, and if they do, will they not immediately dig new holes, and thus do more damage than if left to go freely into their old haunts? Their destruction is the only sure remedy—but how to secure this is a puzzling question.

Cotton Wadding *versus* **Cucumber Bugs.**—Take cotton wadding, cut it into pieces 8 inches square, split it, spread one piece glazed side up over each hill, just as the plant is coming through the ground, and pin it fast to the earth, with a sharp stick at each corner, a wire will do as well. This will do to keep the wind from blowing it away. This practice J. Banister of Essex Co., N. J., assures the *Agriculturist* "will keep all bugs off, and protect the vines from slight frosts. The protection is perfect, the result satisfactory, the cost trifling; and the crop will or may be two weeks earlier than it can be without this protection."

Coal Tar for Moles and Cut-worms.—"C. C.," Jamesburg, N. J., alluding to doubts stated in a recent number of the *Agriculturist*, says that he really *eat* peas, says, that however that may be, they *destroyed* his crop, at least, for two years. Last season he soaked the peas in a week solution of coal tar—a teaspoonful of tar to a quart of water—and the moles did not disturb them, though at work elsewhere in the garden. A neighbor drove them from working in his sweet potato hills, by pouring a little of the tar water in a slight trench around the plants. It was also tried around tomato and cabbage plants, and the cut worms did not trouble them.

Old Horses.—"Senex." Some horses are old at ten years of age, and some not until twenty. It depends chiefly upon the way they have been treated. The prevailing impression that a horse necessarily begins to fail after nine years of age, is a mistaken one. A horse does not attain his full growth and perfection of physical power till past his seventh year. He does not begin to run down right away. If he is not overstrained with heavy loads, or over-driven, or misused in any way, he will be in his most serviceable condition between his seventh and fifteenth years. For a family horse, or a safe saddle horse, or for real valuable service on the road or the farm, give us one who has sown his wild oats, and is content to be sober and quiet.

Glanders in Horses.—S. B. H., of Lumberton, N. J., in reply to the article on page 44, February *Agriculturist* says: He does not think by the symptoms that the horse has the glanders, but rather *Caries* of the teeth. The horse should be examined, and if the teeth are found to be decayed they should be extracted. Caries are often taken for glanders, and a person should be very careful to examine the teeth before resorting to severe treatment for glanders.

Points of a Horse.—"M.", of Malden, Mass., and others, will find illustrations on page 11 of vol. 18, (1859,) showing the points of a horse, both in skeleton and covered with muscles. We can not repeat them now.

Cattle—81 More on Each.—An intelligent observer, not himself interested in raising or selling improved cattle, writes to the *Agriculturist* from Hartford Co., Conn., that he doubts not the influence of the State Agricultural Society, and of the late Homestead, have together raised the value of all cattle in Connecticut an average of $2 per head; and he well says: How large would be the aggregate profit, if the average value of all the cattle in the United States were increased in value only $1 per head. Yet this increased value, and more, will be secured so soon as farmers understand the result of even a slight admixture of improved blood.

Garget or Caked Bag.—A. A. H., of Hillsboro' Co., N. H., communicates to the *Agriculturist* a simple remedy that, he says, will cure a cow in nine cases out of ten, if applied as soon as discovered, or very early. Bathe the bag in cold water for 30 or 40 minutes. Two applications (night and morning) will effect a cure.

Wrong Side of the Tree.—A subscriber in Stark Co., Ill., suggests a friendly criticism on the vignette of the February *Agriculturist*, viz.: that the man begins to cut on the wrong side of a leaning tree; he thinks "the artist at least was not brought up in the woods."—Precisely so, but we claim to know better, having felled many hundreds of trees with our own hands. (The "*we*," here includes several editors.) The picture was designed merely as a pleasant sketch of a scene common in the western wooded countries, and not to illustrate the particular method of felling trees. We acknowledge the criticism, and say to all novices when cutting down leaning trees, make the first cut, a largest notch on the side the tree is to fall, which will prevent its splitting upward.

Coloring of Autumnal Foliage.—"Mary" thinks, as do many others, that the beautiful coloring of the leaves in the Fall is caused by the frost. Doubtless King Jack hastens the painting somewhat, and dashes in some of the most vivid tints. But that is all. Did you not observe, last Autumn, that the trees were dressed in their most gorgeous robes, and that, too, before there was scarcely any sign of frost? The transformation was gradual, and therefore less striking than when it is the work almost of a single night. This change in the color of the leaf we must therefore ascribe to its ripening, rather than to its freezing.

Soda, Saleratus, etc., in Cookery.—A. M. Ward, Hartford Co., Conn., writes: "Four years ago I forbid the use of *Soda* and *Cream of Tartar* (doubtless saleratus also.—Ed.) in my family—we had spent money by hundreds of dollars on our teeth, but a *soft rot* ever made bread better. Now for two years past, a "toothache" has been unknown in our circle. I have two children, the oldest 5½, and neither has a tooth blemish. At first my wife said 'You can have no cakes now, nothing made of flour, but plain bread, and even that *uncertain*,'—but we have no lack of such luxuries, good in quality and variety. In my receipt book I discard *any* and *all* receipts having the above articles incorporated; and as a humane medium I would like to see the same stand occupied by the *Agriculturist*." (On the other hand, we could speak of the good resulting from the use of soda as a tooth wash. Chemistry does not indicate the unhealthfulness of moderate quantities of soda and cream tartar. Soda is an alkali, and neutralizes the action of acids in sour foods. Tartaric acid can be no more hurtful than the grape juice from which it is derived.—Ed.)

Botanizing Boxes and Bags.—"J. A. G." On page 276, Vol. XX, we mentioned an India rubber bag for carrying flowers; doubtless oil silk would answer. The flap must be made large to prevent circulation of air; the fabric light, and when filled it must be carried in a tin or other box. Delicate flowers are best carried and kept from wilting in corked bottles with a few drops of water, and straws enough to prevent their falling from one side to another. A good, close shutting, tin box, oval, 6 or 7 inches wide, 3 or 4 deep, and 12 to 14 long, opening on the side, and having a compartment at one end for water plants, with a cover like that of a pint pail, is a convenient form of botanical box for common use.

"Land Poor."—A subscriber who read the article with this heading, published on page 337, last volume, says it was intended for him, and that he shall take immediate steps to reduce his cares, expenses, anxiety, labor and taxes, by disposing of a portion of his land and improving the remainder. He is no longer going to be a slave to the title of "large possessions."

One Man's Complaint.—Among all the good words said to and for this journal, it would be strange not to have a complaint now and then. If done in a right spirit, we think most of those who tell us of our faults as well as of our good deeds. Here is a complaint we do not like: Mr.——— writes that "he can't endure the *Agriculturist* any longer, because it uses the imperative mood." [This man has studied grammer, and understands *moods*.] "The paper continually says 'do so,' or 'do so,' and I don't like this imperative tone...."—Well, well, must we give up our most cherished plan of putting a good many thoughts into a paper that can be afforded cheaply?—we do not like to have the appearance of haughtiness It is briefer to say: "Look out for slippery paths in the cow yards; spread some manure on the asparagus bed to keep it from freezing deeply; put a few bundles of straw around the pump when liable to be frozen, etc." But must we needs say: "It is respectfully and reverently suggested that the reader should look out that no slippery places be left in the cow yards; we respectfully and humbly suggest that the reader will find it advantageous to put some manure on the asparagus bed to keep it from freezing too deeply," etc. Why friend, we are in favor of the utmost suavity in talking to members of this free and republican country; but it is so much *shorter* to use the "imperative" form to convey the same idea, that we beg the privilege of continuing it *so as to save room for more hints*.

Okra Seed for Coffee.—S. Ransom, Warren Co., Ill. The seeds you send are *Okra*, (not Oker, as called in the Chicago Tribune.) For culture see April *Agriculturist*, p. 101. The plant is very common, and the seed abundant—on sale at all our larger seed stores. We have heard of the dry seeds being used for coffee, but have not tried them, and do not think they are of much worth for this purpose. The green pods are excellent for making soup—called "Gumbo Soup" at the South. We grow it for this from seed sown every Spring.

Illinois Coffee.—Peas $1,240 per Bushel.—Cautioning our readers against coffee humbugs, (page 101,) we called upon Mr. Huffman, of Illinois, to make some return for the $1.06 sent him. In justice we will say, that three weeks after the money was sent, we received a package of *53 chick peas (Cicer arictinum)*. They cost just *two cents* each, and we presume they will make as good coffee, as any other *peas*. Printed directions for culture, etc., accompanied them. Now, although the pods yield but *two* peas each, we think, judging from our own crop the past season, Mr. Huffman has made a good thing out of an old pea, not unfrequently sold by our seedsmen during the past 20 years.

Patriotic Farmer's Club.—The Club at White Plains, N. Y., (Henry C. Field, *Pres.*, Sol. A. Haviland, *Sec.*, Jas. Gibson, *Treas.*,) at their meeting April 9, adopted patriotic resolutions, giving thanks to their brother farmers and others, battling nobly and bravely in the service of their country.

A Snowy Country.—The Maine Farmer states that a severe snow storm entirely covered a house in the town of Mexico, (Me.,) burying two families, who were only relieved by the neighbors tunnelling through 40 feet of drift until they reached the front door. If "snow is the poor man's manure," Maine should be a fertile State.

Rain in California.—Apropos to the above is the amount of rain which fell in California and Oregon during the past Winter. According to the California Farmer, over 35 inches of rain fell in San Francisco from the 10th of November to the 23d of January. The average quantity of rain in that vicinity is about 20 inches annually, while here, in the vicinity of New-York City it is 55 to 60 inches.

Cheap Sewing Machines.—A Babcock, Union Co., Ill. All these small "pocket" machines, which are screwed upon a dining table or stand, and work with a crochet hook or needle, are altogether too cheap, or rather dear, at any price, whether it be $5 or $10. We know purchasers who would be glad to re-sell their "cheap machines" for $1 or less.

Manure Book Wanted.—Several subscribers inquire for a good book adapted specially to the use of manures; and one, of a seeling told that there is no such work, complete and reliable, suggests that some practical farmer or competent chemist would benefit others and his own pocket also, by getting up such a book. We do not know any one man capable of writing such a book in the present state of our knowledge on the subject. There are too many unsettled theories as to the action and value of different kinds of organic and mineral manures. In a series of articles given in the *Agriculturist*, Vol. 19, (1860), we tried to set forth our own views, so far as confirmed by experience—with some theory.

Soda Crackers.—We published in 1860, the method for making soda crackers. It is hardly worth while to repeat it, for it is very difficult to make them in private families so that they will resemble the bakers'. A sponge is set over night, and the next morning stiffened with flour, butter or lard added, and the whole well rubbed together and beaten, and finally rolled out, cut, and pricked as we see them, and baked in a brick oven.

The Agricultural Bureau—Who Shall be at the Head of it?

Letters from Washington assure us that the House Bill for the Establishment of an Agricultural Bureau, will certainly be passed in the Senate and become a law. We were at first inclined to favor its passage, even with its objectionable features. But we can not do so, and for this reason. Within the last three weeks we have received ever so many letters from parties (and their friends), who are lobbying the bill through, because each one of these parties has a *personal* interest in the matter—each one is expecting to be placed at the head of it with the comfortable salary of $3,000 a year. Some of them are our personal friends, good, honest men, too; and we especially dislike to forfeit the good will of those who privately promise that the *Agriculturist* shall lose nothing if it will only advocate their individual claims. How can we do so for *each*, if the interests of agriculture compel us to say frankly that we do not believe one of the applicants now seeking the appointment of Commissioner of the proposed Agricultural Bureau would, if successful, be "the right man in the right place?"

If the proposed Department, or Bureau of Agriculture, as a part of the Government of the country, is to amount to any thing, it must have at its head a man of no less breadth of mind and capability, than is required for the other Departments of the Government—added to which he should have the *experience* of a large cultivator. The trouble in the past has been, that the sub-Secretaries in the Department of the Patent Office allotted to agriculture, have not been first or second class men, but mainly fifteenth rate inefficient fellows—such as D. J. Browne, Lee, Clemsen, etc. We could name a dozen men among the reporters of the city press, two dozen or more city or country editors, a hundred country-bred clerks in our city stores, and two hundred officers of our Agricultural Societies, any one of whom would be better fitted to conduct the Department of Agriculture than several of those who have had most to do with that interest in Washington for half a dozen years past. We will guarantee to send out from the *Agriculturist* Office at least five men who would conduct the seed distribution, and other matters, in the wing of the Patent Office, and collect and diffuse more valuable statistics, and even get up a more useful "Annual Report" than anything that has emanated from Washington, since Commissioner Ellsworth's day.

But we want, farmers want, the country wants at the head of the proposed Agricultural Bureau some such man as N. P. Banks, for example, who has had not only large experience as a cultivator, but has shown himself to possess administrative talent, a broad comprehensive mind capable of looking over the whole country, to take in at a glance the needs of agriculture, and the facilities for supplying those necessities. A fourth rate clerk can attend to the details, but eminent ability is required to direct what is wanted. Such men are to be found, and our great agricultural interests need their efforts, and afford abundant scope for their talents. There are many more men fitted to be governors of States, than there are to be placed at the head of a Bureau of Agriculture, in the Government of these United States—pre-eminently the greatest agricultural country of the world. We hope the President, or whoever may have the appointing power—if the proposed Department be organized—will weigh the matter well, before filling so important an office. It is not our province to nominate candidates. We named Mr. Banks merely as an illustration of the kind of talent wanted. We see that the Saratoga Press, in a recent editorial, and two or three other journals, nominate the writer of this, for "Chief of the new Agricultural Bureau." With thanks for the friendly spirit shown, we beg most respectfully to decline any such nomination—even on the intimation that "if we dont take the office, somebody less well qualified will." We don't begin to possess the ability of the man whom we would have placed at the head of such a Department, and if we were vain enough to suspect we had, our present position is abundantly satisfactory for our ambition, and is only second in importance to an agricultural Bureau. Every day we feel our own incompetency, and would be happy to call to our aid some one who can make the *Agriculturist* even a better promoter of the agricultural interests of the country than it now is. We would gladly surrender the editorial pen entirely to more competent hands, and devote ourself wholly to the necessary pecuniary or publishing interest—as a "hewer of wood and drawer of water."

We trust the views set forth above will be a sufficient answer to those who have done us the honor to solicit the influence of this journal in aiding them to secure a place at the head of the Agricultural Bureau—proposed. We care not who secures the office, if he be an honest man, and fully *competent* to perform its duties.

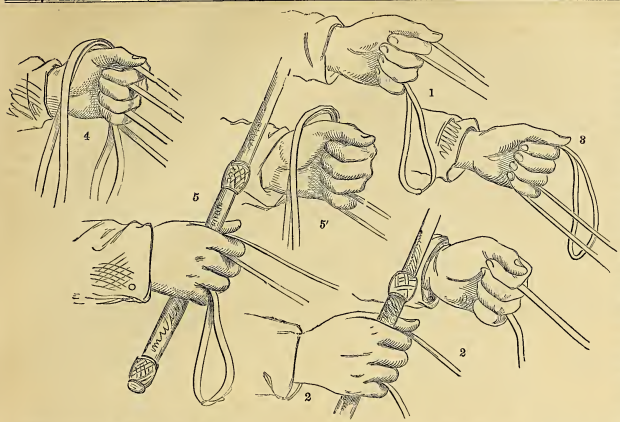
Rotation of Crops.

There are various arguments for the practice of raising different kinds of crops in succession upon the same piece of land, now common in the older parts of this country. These arguments are based both upon practice and theory; the former being to most of us the more conclusive. Long ago it was discovered that much land would bear a good crop of grain only once in two or three years without manure, and that to secure a crop, it was necessary to plow or otherwise work over the land in the mean time. This system of *fallowing* necessarily left the land at least half the time with no crop upon it, and the farmer depended for a crop upon the decompositions wrought in the soil by the action of the elements, aided by his own labor in overturning and pulverizing it. When it was discovered that a crop of roots could be raised between the crops of grain, and the effect of fallowing still be realized, the roots were regarded as clear gain, and the whole system of farming was changed. Now, on all those lands where farmers are obliged to be economical of fertility, some system of alternation or variation, if not a proper rotation of crops, is employed. It is enough for most farmers to know by experience that—whether they depend on the fertility of the soil alone, on the green manure which they plow in, or on the dung of cattle which they apply—they realize by this means a much better return for the time, labor, and available fertility expended.

Some crops seem very rapidly to exhaust fertility so far as they alone are concerned; and the theory of many is, that this exhaustion results from their appropriating the most available supplies of certain substances essential to their growth. Other crops either use less of these substances, or have the ability to collect them more easily. Thus turnips, though they remove from the soil a comparatively small quantity of the phosphates, yet an abundant supply in a very available form promotes their growth and increases the yield, in an entirely disproportionate degree.* And wheat and other small grains demand a proportion of available nitrogen greater than other crops which remove more from the field. The benefit of an alternation or rotation of crops being a recognized fact, and it being also true that under certain ill-judged modes of farming land became unaccountably *sick* of certain crops which before grew well, M. Decandolle proposed a theory which met the case, and was almost universally received. It was that the roots of the crops throw off, or excrete substances in the soil (which is true), and that these substances while injurious to the plant which throws them off, are food for other kinds of plants, (which, at least to any appreciable extent, is not true.) Still it very simply and fully accounted for the facts as then known.—Almost all plants have their natural enemies, parasitic plants, like smut, rust, etc., or insects which live upon them—and when a plant grows several years in the same soil, it becomes more and more a prey to these, and perhaps subject to other diseases having similar but not so obvious causes. In this view of the subject the excretory theory may find legitimate application.

When the full value of manure is realized, practice has demonstrated that crops must follow each other in the order of their dissimilarity—for instance: grain, roots, grass, leguminous plants (peas, beans, clover seed, etc.); oil plants, (colza, rape, poppy, flax seed, etc.); and commercial plants raised for the plant itself (tobacco, hemp, flax, madder and other dye-stuffs, etc.) The longer the time intervening between two crops of the same plant, the better. Rotations are usually short in this country, and the land manured but once. In other countries, rotations continued through ten or twelve years are not uncommon. One reason for this is, that in our market there is not a demand for so many products, though this evil is rapidly diminishing. Different soils and different markets make different crops profitable. The culture of Indian corn in this country is so different from the other cereals, that it is classed by itself, or with potatoes, though potatoes will not bear the manure that corn will, and in this respect, tobacco and corn are similar, and may occupy similar places in a rotation. Where the clover and wheat alternation is practiced, good crops may be raised several years without manure; thus: wheat on clover sod plastered and seeded down with clover; the next year clover fed or cut; third year clover pastured in Spring, and clover sod turned under and wheat sowed. Some land improves for a while under this system, but there is danger of its becoming clover sick, and refusing both crops. Another ill-judged rotation is: corn on sod with manure, oats, wheat with bone-dust, superphosphate or guano; and finally grass. Corn with manure, oats; clover, wheat, grass, is much better. Corn or tobacco, roots, spring grain, clover, wheat, grass, is still better, and for many parts of the country a good practical rotation. The wheat will be benefited by a special manuring in many cases, and the roots may receive the bulk of the manure plowed in in the Fall after the corn is taken off, —the corn being made to depend in a great measure on the sod turned in. W.

* It may be considered still an open question, whether the beneficial results arising from the use of soluble phosphatic manures are due to the direct absorption of phosphoric acid as plant food, or whether this acid does not act mainly as a powerful absorber and retainer of ammonia. So also it may be questioned, whether less of the costly phosphoric acid, and more of the cheaper sulphuric acid may not be productive of equally good results. O. J.



Driving Horses—Holding the Reins.

Many a fatal accident has occurred, with good steady horses too, from the driver having a loose or awkward hold upon the reins just at some critical moment. Not only must his attention be upon his horses, and his eye schooled to notice the least unusual motion of their heads, ears, or gait, any loosening of a buckle, or slipping of the harness, but the reins must be so thoroughly in his grasp that at all times the team is fully under his control, and not only so, but conscious of it themselves. A weak, uncertain hold upon the lines gives a wilful horse a sense of unrestraint, a timorous one a lack of confidence in his driver, a shying, frisky, nervous beast all the excuse he wants to turn a summerset or ent some other caper. Herbert, (Frank Forrester,) lays great stress upon the *manner* of holding the reins, and we employ sketches in his "Hints to Horsekeepers," to illustrate the subject. There are two methods generally approved; in both the reins are commonly held in the left hand, and the off-rein passed into the right hand whenever necessary. This must often be the work of an instant, and so in whatever way the lines are held, the nigh-rein must not be in the way, nor may the hold upon it slacken. In the engraving at 1, the off-rein is seen to pass over the fore-finger, the nigh one under it, and both out between the ring-finger and little-finger. The right hand takes the off-rein, as seen in 2 and 2', while at the same time a firm grasp is had upon the whip. At 3 we see another method of holding a single pair of reins, the off-rein in this case being between the ring-finger and little finger, and the nigh-rein below, both ends passing out over the fore-finger, beneath the thumb. This is not so strong or easy a hold. The method of holding the reins in four-in-hand driving is illustrated at 4, 5 and 5'; 4 shows the left-hand holding the four reins, the off-reins being the upper ones, the ends passing down through the hand; and the nigh-reins held as both reins are in 3, the ends passing up, and over the thumb. When taken in two hands, the nigh-reins remain unchanged in the left hand (5'), and the off-reins are passed into the right hand (5), and held as in 1. In whatever way the reins are held in driving, the driver should be so familiar with them that he can, without giving a thought to it, as quick as thought, change or shift them about, and never slacken his hold or lose perfect control of his horses.

Washing and Shearing Sheep.

The object of washing is to cleanse the wool from the yolk or gum which is an oily soap secreted by the skin, as well as to remove any other soluble dirt from the fleece. The hard balls of filth which adhere to the wool will remain in spite of the washing, and if soaked often stain the adjoining fleece. In those sheep whose wool abounds in yolk, as the Merino, the shearing is much facilitated by washing, and in all kinds the wool is whiter, cleaner, and presents a better appearance. The objections to washing are, that unless extreme care is used, accidents will happen to the sheep, and this loss more than balances the gain to the owner. Even with care, colds and catarrh ("the snuffles") almost uniformly arise from the sudden chilling bath, and the health of the sheep is often permanently injured. Without washing, sheep may be safely shorn ten days to three weeks earlier than when we have to wait for the weather or water to become warm. At this season many will be shedding their wool, especially ewes with lamb, and a large share of the fleece is thus sometimes wasted. The loss for a few month's time embracing the last of May, and first of June, probably equals or exceeds the growth for the same period, so that one twelfth, at least, is wasted.

To get the greatest yield of wool for the year we should shear early, without washing. This is also a saving of labor, for the labor of washing more than balances the extra trouble of shearing them unwashed, and it also secures the health of the flock. But on the other hand, buyers insist on deducting one third for unwashed wool, and the quality appears hardly as good as it really is. Most kinds of wool do not shrink one third by washing on the back of the sheep, but farmers will continue to roll up in their unwashed fleeces what really belongs to the dung-hill, so that perhaps it is not, on an average, too large a deduction. The best flock masters in many sections, are generally discontinuing the practice of washing; and breeders of very valuable sheep very rarely, perhaps never, subject them to the operation. If a sheep is worth $100, the risk to his life and health is too great, and it is safe to say that in a flock of which it will take 20 sheep to be worth $100, the risk is decidedly greater, or rather there is almost an absolute certainty of some essential damage to the flock by colds contracted, etc. Sheep washing as practiced by the best farmers is on this wise: A morning is selected as early in June as the weather is warm enough not to chill the washers or sheep, immediately after a good rain. The sheep are then well soaked, and half the labor is accomplished. There is no dust on the roads, and the sheep may return clean to their pastures. A pen made of boards or hurdles, just large enough to hold the flock and so high and firm that they can not possibly escape, is upon the bank of a clear brisk stream. A dam of a few feet in hight raises the water so that it flows in troughs and falls with some force upon the sheep held by the washers in a pool below, where the water is just deep enough to swim the sheep. By coaxing with salt and gentle driving, the sheep are gathered in the pen. All *rudeness* in driving and in handling is avoided; when once frightened they are very difficult to manage. Two men go into the water to wash, a third catches the sheep, and a fourth helps them out of the water. If they have not been well tagged before, it should be done before washing, for the water will not remove the hard lumps of dung. The sheep must not be held by the wool, except about the head, for it pulls out very readily at this time. The washers hold the sheep under the falling water, squeezing the wool until the water runs away clear. It is surprising to see how quickly the fleece of a sheep, well soaked by a previous rain, is cleansed.

Of all farm operations, sheep washing most needs "*the eye of the master.*" In the excitement of the rude scene, the flock are liable to abuse, and too often from crowding in the pen, heated from over driving, or rude handling, serious losses occur; and sheep are not unfrequently found in the pen dead, or in a dying condition. They must be driven slowly from the washing to a clean pasture. The whole operation is a most distressing one to the sheep, increased almost uniformly by the roughness of the men, the best of whom seem to think a fine sport, and show no tenderness or humanity in their handling of the poor frightened beasts. In about a week, if the weather is dry, they will be ready for shearing. They must not only be perfectly dry but the yolk must flow so as to give an oily softness to the wool. The barn floor is usually used for shearing, and must be repeatedly swept as the fresh shorn wool is easily soiled. Careful shearers, who will neither waste the wool by cutting it in two, nor wound the sheep, though this care makes them slower, are to be preferred to those

who eut and slash to do a great day's work.

In doing up the fleece, the inner side of the wool must be out, and there must be no concealed dirt within. The shrewd wool buyer buries his nose in the snowy fleece, like a dog after game, and external purity will not serve to conceal dishonesty and filth lurking within. Before the sheep are turned away they receive the owner's mark upon the side. Use a mixture of spirits turpentine, linseed oil, and lampblaek. Turpentine facilitates the drying, but used in excess, the mark washes off too easily. The tar bucket must be on hand, and a dab on the nose is supposed to be a sovereign remedy to prevent all future ailments. With fine wool sheep which lamb in May, doeking and castrating the lambs may be performed at the time of shearing, but if the lambs are earlier it may be best done while the weather is eool. They suffer less while they are small and there are no flies to attaek the wounds. The tail should be cut off at the first joint, leaving the skin long enough to cover the stump.

Notes on the April Agriculturist.

BY A WESTERN FARMER.

"*Patent Office—Agricultural Department.*"—A humbug—and nothing else! as it has been heretofore conducted. Abolish the thing at once, or put a sensible, honest, agricultural man at the head of it. Instead of the charlatans who have occupied it pretty much ever since it was established. Its books have been—trash; its seeds, nine out of ten—worthless. A Congressman's "tub," to his constituent "whale." I could talk an hour about it to prove my assertions, were it necessary to establish the proof. I hope Congress will not vote another dollar to support it, unless the whole thing is thoroughly reorganized.....

"*Hints on Tobacco Culture.*"—Folks will chew and smoke and snuff—talk as much as you please of their immorality, unwholesomeness, and expense... As for the *nastiness* of the habit, let those whom it troubles, settle it. At all events, tobacco is used as much as ever, and probably will be so long as the users can get the means to pay for it. Such, then, being the fact, let those who grow the weed, produce the best article, and at the cheapest rate.....

"*Where did it Come from?*—A most suggestive article. A chapter occupying half your paper might be written on it, and not half exhausted. Some years ago, a certain Doctor, editor of one of our agricultural papers, and late an editor of a Georgia paper of like character, used to hold, that according to the system—or rather, no system—of our American agriculture, our soils were 'all going to pot.' The fact is, our soils, where they have been thirty, or forty years under intelligent cultivation, are growing better. But it is too long a story, and if I once go into it, I shall not know where to stop. Any thinking man can eypher out the reasons to support any asserted *fact*.....

"*Chester County Pigs.*"—A good breed of *large* hogs, no doubt. But why "Chester" County? I assert, and ask for proof to the contrary, that they are nothing but a composite *style*, not *breed* of hogs, made up of Leicester, Yorkshire, and every other sort of stout, good-looking white hogs that the breeders of them fancied as the *material* to make up the thing they choose to call "Chester County." Show me the pedigrees, accurately traced back to the originals, and then we'll talk further about it. I have seen the predominating characteristics of at least three or four good breeds of pig in the "Chester's;" some more, some less, but not uniform, either in the whole breed, or in a single litter. When I see half a dozen so-called thorough bred sows breeding from one boar a lot of pigs looking as much alike throughout as so many white kidney beans, I'll believe in the *purity* of their blood—and not before....

"*Value of Blood in Animals.*"—Yes. I believe in blood—in *folks*, even, as well as in cattle, pigs, or poultry; and breeders of stock will never get any thing right, and *certain*, until they pay attention to it. But what do you mean, Mr. Editor, when you say, "Our breeders of thoroughbred cattle, of all the improved breeds, commit a great error in holding their bull calves at so high a price as to prevent sales, and finally, as is often done, making stags of them rather than sell them at a low price. If they would even give away the bull calves which they do not wish to keep, and which are not worth a very high price, on condition, &c." A total mistake, Mr. Editor. Cost nothing, worth nothing. If a man can see no better quality in my bulls and cows, which cost me two, three, or five hundred dollars a piece, than in his own dirty scrubs, and dunghills, worth twenty, he is not fit to have one of them. I've tried all this thing for thirty years, or more, and know just what it amounts to. No Sir; my experience is—and I am not called a stingy man, either—I'll make meat of a calf, pig, sheep, chicken, goose, duck, turkey, or pigeon, before I'll *give* the first hair, or feather of either to one of those unappreciative non-improvers, who will insist upon it, that, unless he can beg, borrow, or more likely, *steal* the services of my male thoroughbred things, his own plebeian wretches are as good, or a little better than mine. Just practice on your own advice a year or two, and if you don't change your mind, I'll say that myself, and not you are mistaken.

"*Six best Shade Trees (Deciduous).*"—You have *not* got the "six best," Mr. Editor. The "White Elm" is good—the best of any—grand, thrifty, and enduring. The sugar maple is good, but too symmetrical, and formal, for picturesque effect. Yet I would have it, in moderate numbers. The several varieties of white, red, and other *soft* maples are better. They are hardy, thrifty, and throw, and dash, and wave their spray around with a freedom and grace that the *sugar* maple knows nothing about. I would have at least three of these *soft* to one of the *sugar*. As to the "oaks"—among shade or lawn trees they are like our American Indians when allied to civilization. The association kills them. The oaks, compared with most other of our native forest trees, are not hardy. They are difficult to transplant, and live, they grow comparatively slow, when they grow at all. They leaf out late, and have little beauty in their autumnal garniture, which I think a great merit in all shade trees. Still, a few well selected oaks, scattered in with other trees, look well, for variety; but I would recommend no one to plant a *row* of them. The "majesty, and grandeur" of a full grown *white* oak I eoncede; but as for the timber, they are better grown in a forest. I've grown thousands of them, and have them now, from the one-sized sapling to those fit for the keel of a ship. *My experience* is: plant them *very sparingly* as shade trees. The "Linden"—good—either the European, ("*Tilia Europa*,") or the American "Bass wood." They are beautiful, grand, and stately; early to leaf, and late to fall; easy to transplant, and thrifty to grow. The "white ash" is a noble tree, but too late in leafing out, and too early to shed in the fall. Still, for a variety, I would have a few, only. Like the oak, a valuable timber tree, and better in the woods than elsewhere. The "Cucumber" is a fine tree—when you can get it—but it is difficult to grow, and if in a *windy* position, very apt to grow one-sided. Yet, one, or two for variety are well enough. Better fill up your other varieties with Birch, Willow, and Horse Chestnuts. The Tulip, or white-wood is a noble tree, of good symmetry, but a hard one to transplant and live, unless reared in the nursery. I never yet saw an avenue, or row of them, even in a white-wood country. Another thing: they will thrive only in a free, well drained soil. "Buttonwoods" are all diseased, and have been throughout the United States for the past thirty years. I know of but one truly *healthy* one within miles of my home, and I have many on my own grounds—cutting them away every now and then for the reason of their diseased unsightliness. As to the *nut*-bearing trees you name, be sure they will be protected from the ravages of "the boys," or the vexation of losing their fruit is more than they are worth. They are all hard to transplant, successfully. The American Chestnut is a princely tree in size and appearance, and we have scarcely one more useful. The beech is refractory to transplant; and the birch capricious in its choice of soils. A cool moist soil suits it best; White Willows grow every where, and Horse Chestnuts thrive in any tolerable soil, and are easy to transplant and live.

Advertisement—"*Something New.*"—"Dr. Brown's *patent* baby tending machine!" "Saves from $100 to $300 per year in any family where there is a baby!" Well; that will do—for an "Advertisement." Now, Dr. Brown, in that "saving" of $100 to $300 you tell a tough story! I know scores of families counting their children by the dozen, hardy as coons, and saucy as chip-monks, whose parents were never worth three hundred dollars, and never will be. Tough, stout, athletic youngsters—boys, and girls, as likely to be "somebody" in the world some day or other, as any body's children—and no "patent" about them either. A tree "gum" split in two, or ten feet of rough boards box shaped, with a hewed rocker under each end, and your "baby," after a full draft of a healthy mother's milk, is equipped in all its wants. Folks that don't know any better than to raise children at three hundred dollars apiece for a "baby jumper," may buy your machine. We don't do it in *our* country. JOSH.

Concentrated Manures, or Articles sold as Such.

We received just too late for our April issue, an article from Dr. Evan Pugh, President of the Agricultural College of Penn., giving the results of the analysis of several artificial manures. The analyses were made under his own direction, and all the samples except those marked in the table A, K, and L, were obtained by a responsible member of the Philadelphia Agricultural Society, from the respective manufacturers of each, or their agents, without their knowing for what purpose they were procured. Mr. Lawes sent Dr. Pugh a tun of his superphosphate (A), and half a tun of his sulphate of ammonia manure (K), and from these the samples analyzed were derived. We are obliged to condense Dr. Pugh's communication somewhat; the following is the main substance of it. We do not fully endorse all the estimates, but let the Doctor give his own views:

ESTIMATION OF THE VALUE OF MANURES, ETC.

Manures are mainly valuable for the *phosphoric acid*, *nitrogen* and *potash* they contain. *Sulphuric acid* is much less valuable, and other constituents may be neglected [in high priced fertilizers]. All these substances are much more valuable when in combinations soluble in water, than when in insoluble combination. Thus: potash in wood ashes, is more valuable than in powdered glass. Phosphoric acid, in superphosphates, is more valuable than in *raw* or *burned* bones. Nitrogen is more valuable in a salt of ammonia than in leather or horn. It is easy to fix a price upon all these substances by seeing at what price substances, containing known quantities of them, can be purchased in the market. We thus find the values of

Potash (as in wood ashes) to be worth about	4c. ₩ lb.
Phosphoric acid, insoluble (as in raw and burned *bone* phosphates.)	4½c. ₩ lb.
Phosphoric acid in combinations, *soluble in water* (as in superphosphates).	12½c. ₩ lb.
Nitrogen in combinations easily soluble.	17c. ₩ lb.
Sulphuric acid.	1c. ₩ lb.

Different agricultural chemists have assigned values varying slightly from the above,* which, with the exception of the last, were adopted by Prof. Johnson, of Yale College, in his able report to the Connecticut State Agricultural Society.†

In the statement of the analyses, the figures in the principal horizontal lines indicate the percentage composition or number of pounds of each ingredient in 100 pounds, and immediately below each is its market price. In estimating the selling price, the tun is regarded as 2000 pounds. Thus: in 100 pounds of Lawes' superphosphate (A), 13.77 lbs. 1

TABLE of *Analyses and Computed Values of Various Fertilizers.*

MANURES EXAMINED.	Volatile and Moist.	Nitrogen.	Phosphoric Acid, in Water, Soluble.	Phosphoric Acid, in Water, Insoluble.	Sulphuric Acid.	Insoluble Silicates (Sand.)	Selling price per ton.	Calculated value per ton.
A—Lawes' Superphosphate, (English)	30.78	.....	13.77	4.48	28.89	4.46	.....	$44.26
Value of Constituents in 100 lbs.			$1.72	$0.20	$0.20			
B—Rhodes' Superphosphate	46.18	.....	11.11	4.02	30.66	2.26	$45.00	$37.60
Value of Constituents in 100 lbs.			$1.39	$0.18	$0.31			
C—Berger & Butts' Superphosphate	19.75	.....	4.13	10.58	11.73	12.89	$45.00	$22.40
Value of Constituents in 100 lbs.			$0.52	$0.48	$0.12			
D—Baugh & Son's Raw-bone Phosphate	33.65	3.17	.05	10.52	18.18	5.53	$45.00	$33.50
Value of Constituents in 100 lbs.		$0.54		$0.47	$0.18			
E—Baugh & Son's Ground Raw-bone	40.55	4.49	.....	23.14	.96	.08	$35.00	$36.20
Value of Constituents in 100 lbs.		$0.76	.....	$1.04	$0.01	.....		
F—Tasker & Clark's Phosphoric Fertilizer	40.13	2.76	1.76	11.52	6.64	8.65	$40.00	$25.40
Value of Constituents in 100 lbs.		$0.47	$0.22	$0.52	$0.06			
G—Tasker & Clark's Meat and Bone Compost	47.49	1.23	.....	9.43	.44	14.11	$25.00	$13.60
Value of Constituents in 100 lbs.		$0.21		$0.42	.....			
H—Mapes' Nitrogenized Superphosphate	25.31	1.35	.11	9.10	9.08	25.16	$50.00	$14.60
Value of Constituents in 100 lbs.		$0.23	$0.01	$0.40	$0.09			
I—Lodi Company's Poudrette	41.59	1.38	.....	6.80	6.96	28.66	$2.00	$11.40
Value of Constituents in 100 lbs.		$0.23	.....	$0.27	.07		per bbl.	
J—Rogers & Gest's Ammoniacal Superphosphates	94.71	18.96	.....	.....	57.34	.34	$45.00	$75.50
Value of Constituents in 100 lbs.		$3.22			$0.57			
K—Lawes' Sulphate of Ammonia, [English]	99.12	20.30	.....	.....	60.42	.....	.....	$80.50
Value of Constituents in 100 lbs.		$3.44			$0.60			
L—Peruvian Guano	64.25	14.98	.....	13.16	.....	1.78	$60.00	$56.80
Value of Constituents in 100 lbs.		$2.25	.....	$0.59	.....			
M—Government Peruvian Guano, [Philadelphia]	43.75	7.50	.....	12.98	2.46	18.34	$60.00	$37.60
Value of Constituents in 100 lbs.		$1.13	.....	$0.58	$0.02	.....		
N—Pacific Ocean Guano	23.31	8.75	.....	9.26	36.21	.42	$50.00	$45.20
Value of Constituents in 100 lbs.		$1.49	.....	$0.40	$0.37			
O—New Fertilizer	17.20	.....	.....	2.43	6.00	58.65	.....	$3.40
Value of Constituents in 100 lbs.			.....	$0.11	$0.06	.....		

soluble phosphoric acid, which at 12½ cents per pound—$1.72; 4.48 pounds insoluble phosphoric acid, at 4½ cents—20 cents, and 29 pounds of sulphuric acid at 1 cent per pound—29 cents; in all $2.21 per 100 pounds, or $44.20 per tun as given in the last column. To learn the value of a barrel of Lodi poudrette, weigh a barrel and multiply the weight by.57, and it will give the value in cents; when a barrel weighs 263 pounds it will be worth about 150 cents.

It will be seen at a glance at the 3d column, that only three manures analyzed are superphosphates; and the quantity of soluble phosphoric acid in Berger & Butts' is so small, that we can consider but 2 of them as genuine superphosphates. Tasker & Clark's fertilizer gives evidence of an attempt to make a superphosphate. The results in this column were obtained by boiling each sample in water 10 or 15 minutes. In the 4th column we have the amount of phosphoric acid existing in the form of raw or burnt bones. By the 2d column we may judge of the respective claims of the manures to the appellations "ammoniated," "nitrogenized," etc. Baugh & Son's manures, made from *raw bones*, show the superior value of this material over burned bones. In the one, 54 cents worth, and in the other, 76 cents worth of nitrogen to the 100 pounds are found, which would not have been present had burned bones been used in the manufacture.

The analysis of sample H, shows that a manure may be named and sold at a high price as an "Ammoniated Superphosphate" without having more than the most insignificant quantity of either ammonia or superphosphate in it. Such a name applied to such a manure expresses a dangerous falsehood. J, shows a large amount of nitrogen, but the manure coutains no phosphoric acid; the name therefore is false, but the manure is good. J, and K, are both sulphates of ammonia and as ammoniacal manures are the most valuable in the list. The two guanos are seen to vary greatly in value.

In the 5th column the amounts of sulphuric acid are given. This comes from that used in making the superphosphates, from that constituting a part of sulphate of ammonia, or sulphate of potash, or from adulterations of gypsum (sulphate of lime) or sulphate of soda. In the 6th column we have *sand*, or earthy matter insoluble in water or acids, and worthless. The last two columns enable us to compare the calculated values with the selling prices. C, D, F, G & H, are sold for about double their values, B, is the cheapest American superphosphate; but it is sold at $7.40 per ton above its calculated value. The most flagrant imposition of all of them is Mapes' so-called "Ammoniated Superphosphate." It is sold for nearly three times as much as it is worth. The manufacture and sale of such a manure deserves the severest censure, as implying either gross ignorance or dishonesty. No wonder that, with such a mixture in the market, farmers are often disgusted with the use of artificial manures.

We find Rogers & Gest's "Ammoniacal Superphosphate" (sulphate of ammonia) by far the cheapest source of Nitrogen; Rhodes' superphosphate the cheapest source of soluble phosphate, and Baugh & Son's ground raw bones the cheapest source of bone phosphate.

The attention of farmers and dealers is seriously asked to the consideration of the above facts. To protect themselves, they should demand that manufacturers guarantee their manures to contain a *definite amount of those elements of fertility upon which their value is dependent.* The evidence which a true analysis gives, is worth volumes of recommendations from those who have "tried the manure."

* Let it be understood that these prices are those established or adopted by most agricultural chemists, and *if* their estimate of the manurial *value* of the several elements be right, these calculations are correct. On this point *we* are not so well satisfied as are some. We still doubt as to the estimated value of phosphoric acid, whether "soluble" or "insoluble." That this element is valuable as a fixer of ammonia, with which it combines readily, is undoubtedly true; and the same, in a less degree, may be said of sulphuric acid. The *essentiality* of phosphoric acid as a constituent in plants, and the degree to which it may be needed in any soil as a specific manure, is another question. We have great faith in ammonia and ammoniacal manures; and for our own use would buy only those largely abounding in this element, unless they contained sulphuric and phosphoric acid enough to fix ammonia from the air in large quantities.—O. J.

† Johnson on Manures, 8 vo., sent by mail for 75 cts.

For the American Agriculturist.

Annual Cost of Keeping a Horse.

Few farmers keep accurate accounts, or have any idea of the expense. Those who make a business of carting and have to purchase all their food, have the means of exact knowledge in their hands. Experiments conducted on a large scale, give the most satisfactory results, as they give a fairer average for single horses.

The Eighth Avenue Railroad Company in this City keep about six hundred horses, weighing on an average eleven hundred and fifty pounds, and consuming daily ten pounds of hay and eighteen pounds of grain—a mixture of corn and oats, ground. With hay at a cent a pound, and the mixed meal at the same price, the daily cost of each horse would be twenty-eight cents, making $1.96 per week—equal to $102.20 a year. The price of hay varies from ¾ to 1 cent a pound in this City, rarely getting above the latter quotation. The price of corn and oats is as often above as below 1 cent a pound. The Third Avenue Railroad Company keep eight hundred and eighty horses, of the average weight of eleven hundred pounds, which each consume nine pounds of hay, and seventeen pounds of grain. This would make the cost of keeping twenty six cents a day, or $94 a year. The Sixth Avenue Railroad Company keep five hundred and thirty horses, of the average weight of one thousand pounds, which average about six and a half pounds of hay, and fifteen and a half pounds of grain. This would be twenty two cents a day, or $80.30 a year. The horses on these roads travel from eighteen to twenty miles a day, and keep in good condition on this fare. It would seem from these figures that it costs twenty two dollars more a year to keep a horse weighing eleven hundred and fifty pounds than one weighing a thousand. Of course a farmer who wants a horse only for the road, and for light loads, should keep a light animal. For many kinds of business, a horse weighing nine hundred pounds is just as good as one weighing twelve hundred, and the extra three hundred pounds will cost not far from forty dollars extra. In those parts of the country where hay and meal are cheaper than here, horse keeping will of course be less.

For the cost of keeping in the country we know one gentleman owning a span weighing 1,000 pounds each, who estimates the weekly cost at three dollars. Another, with horses weighing 1,100 pounds, estimates the cost at three dollars forty cents per week. Another with a pair weighing 1,250 pounds each, at the same weekly cost. Another, with horses weighing 1,000 pounds each, estimates the cost of keeping at three dollars forty six cents a week. This last would be twenty four cents and a fraction a day, a medium between the extreme cases in this City. These cases are taken from Eastern Massachusetts where hay and grain are rather higher than with us. The estimates are for horses worked every day at severe labor. Where horses stand in the stable and are worked but a part of the time, or where they run in the pasture in Summer, the expense will be considerably less. We think it will be found in actually experimenting, that the expense of keeping a horse varies from one to three dollars a week. In all the cases quoted, the food was given by measure, and the fact that the horse kept in good condition, was proof that he had enough. Where a horse has all he will eat, as is often the case, he will consume much more than is necessary to keep him in good flesh. You may safely add a third to the expense of keeping, where a horse is fed in this way. In the omnibus business the average life of a horse is three and a half years; on the railroads it is four years. In the country the average term of service must be at least three times as long. Horses are frequently found twenty years old, and in rare cases thirty years and upward. This short term of life in the City has to be added to the expense of keeping a horse; the longer term in the country makes it cheaper there. One hundred and fifty dollars invested in a horse here, is sunk in four years. There it lasts twelve. EQUUS.

[We acknowledge the receipt of several reports on the cost of keeping horses, giving facts and figures; which will be soon published.]

Value of Dead Animals for Manure.

It is no uncommon occurrence for the farmer, at this season of the year, to have "spare meat" upon his hands. He undertakes to winter more stock than he can carry through in good condition without buying hay or grain, and he does not see the economy of buying food. Some of the stock, unreasonable beings that they are, see the economy of dying, and do it—without consulting the owner. Here a sheep caves in under the wall, or a cow dies in the pangs of labor, from sheer want of strength to bring forth. Here is a dead lamb, ornamenting the fork of an apple tree; there an old horse falls at the manger.

It would be stating the case rather strongly to say that a dead sheep was worth as much for manure as for mutton, that is to say, five cents a pound. The facts might not warrant the statement which we have seen in an agricultural work, that a dead horse well composted was worth twenty loads of manure, that is to say, twenty dollars, though this would come nearer to the mark. Allowing the horse to weigh 1,000 pounds, and the muck and labor to be worth $10. This would make the carcass worth $10, at one cent a pound. It might not be advisable for a farmer to buy carcasses at this rate, while it would pay largely to save every thing of the kind upon his farm, or within his reach.

According to the experiments of Messrs. Payen and Boussingault, three pounds of muscular flesh contain the same amount of nitrogen as a hundred pounds of farm-yard manure. Soluble blood, and salted cod, had the same value. Two pounds of cow's hair, two pounds of woolen rags, two pounds of feathers, two of horn-rasp-ings, were each equal to a hundred pounds of farm-yard dung. They are among the most valuable substances used for manure, according to these experiments. If a half cord of farm-yard manure, weighing about a ton, is worth a dollar, then hair, wool, feathers, etc., would be worth about two cents and a half a pound, and the flesh about a cent and a half, at the same rate.

It is not necessary to attain results entirely accurate to show the economy of saving all these wastes. Above ground they are a nuisance, and a source of disease. Buried, they are lost. But in the muck heap, and composted, they are a source of profit, and pay largely for the labor. We want the crows to prey on grubs and insects, and not on dead animals. We can put these to a better use. Every pound of flesh, rightly used, gives a peck of potatoes. Let them be saved. JONATHAN.

Jonathan's hints are good, but he does not tell what to do with the carcass after we have it. Here is a plan we learned from Mr. Geo. H. Goodwin, of Hartford County, Conn.: The horse is bought as cheap as possible; of course better alive than dead, as a general thing, if he can walk. Four loads of muck or sods are placed in a convenient out-of-the-way place, yet within sight, so that dogs can be watched, and if they manifest too great a regard for the old horse, a well-directed bullet may introduce them to a still closer companionship. Then the horse is taken upon the heap, killed, and the skin removed, which more than pays for the job. Without further ceremony five or six loads of muck and soil are thrown over the carcass, and it is left six months or a year, according to the season, a certain amount of warm weather being necessary, and it not being agreeable to overhaul the heap in the heat of Summer. Then fork it over, throwing out the bones, which will then be well freed from flesh, sprinkle over the heap a peck or two of plaster, and add perhaps a little fresh muck or soil upon the surface; let it lie a month, then fork it over again, and it is fit for use and an excellent manure—worth more than an equal bulk of good barn-yard manure. The bones thrown into another heap, or into the stable manure, to be thrown out again when it is forked over, soon become so rotten that they may be pounded up and used with the manure, or by themselves.

Tim Bunker on the "Horn-Ail."

"What is the matter with your cow, Mr. Frink," said Seth Twiggs, as he leaned his elbow on the barn-yard bars, and looked benevolently at a very spare and hirsute animal, that Jake was milking.

"Can't tell exactly," said Jake, "Guess she's got the horn-ail, or some sich thing."

"I thought the trouble seemed to be in her legs, when she come by my house last night. She walked kind o' totlish," said Seth, knocking the ashes out of his pipe.

"Wa'll that might be. Horn distemper generally affects 'em all over. Had Tucker up here to doctor her last night; he said it was horn-ail."

"What did he give her?"

"He gin her a slice of salt-pork, split her tail, put in salt and pepper, and bored her horns."

"Rather guess there was some squirming."

"Yes, it took three men and all the ropes in the barn to hold the old keow."

"Don't you think horn-ail hurts the milk?" inquired Seth hesitatingly as he relighted his pipe.

"Wa'll as to that, I can't say. It's all the keow we've got, as gives milk, and shouldn't think any trouble in the horns would strike clean threw the beast. Milk is milk, I take it, no matter where it comes from. I never could see any difference in the taste."

"I rather guess milk wont be milk out of that animal much longer," said Seth ominously, and blowing a puff of smoke as blue as his prophecy.

"You don't think she's going to die do you?" asked Jake solemnly.

"The crows have already held a counsel on that animal. Tucker told me so last night."

"The scoundrel! He told me he would warrant her to get well, if I'd give him a dollar for his doctoring."

Two days after the above conversation I was called in to administer upon the carcass of said animal. Jake said he had human feelings, and he could not skin a cow he had milked, and he did not even want to put her in a muck heap. I gave my neighbor due credit for the feelings of tenderness which the death of his cow seemed to call forth. But I could not help thinking that a little more of that tenderness manifested to the animal while living, would have been much more wisely bestowed.

To tell the plain truth, the animal died of starvation, just as many cows die every year in this land of steady habits and Christian civilization. I noticed the cow last Summer, and told Jake he would certainly lose her if he did not give her a better pasture. But he would keep her with his young cattle in the old cow-pasture that has been grazed to my certain knowledge for fifty years, and probably for a hundred, without plowing or manuring except the droppings of the pastured animals, and these were yarded at night. He kept six animals where there was not grass enough for three. They came out of the Winter poor and thin, and this cow having the drain of milk upon her system grew thinner through the Summer. The winter diet of corn buts, bog meadow grass, and salt marsh hay cut short the work of starvation, and fulfilled Tucker's prophecy.

They have a great variety of names for this process of torture in Connecticut, and I suppose in other parts of the country. Sometimes it is horn-ail, or worm in the tail; again it is slink fever, or murrain, black leg, or black tongue, cattle disease, or pleuro pneumonia. It would not do for an intelligent civilized man to see and believe that he starved his cattle to death. Conscience might trouble him, and possibly some of his neighbors might have him before the courts under the statute which prohibits cruelty to brutes. If I were called to judge in such a case it would certainly go hard with the offender. It certainly inflicts more pain upon a brute to starve, than to beat it. The whip upon ribs well lined with fat is a sharp torture soon over. But to keep a cow at the stack-yard through the cold stormy nights of Winter, to give her poor food and not half enough of that is a lingering torment, more cruel than that which the savage inflicts upon his victim bound to the stake. The poor beast can only speak through the hollow ribs, and the bristling hair, and these signs of woe are usually attributed to disease rather than to a lean manger.

This is an evil that legislation will not reach, and I suppose nothing but public opinion will set it right, and that probably not in our day. It would seem that there was no need of losing neat stock under ordinary circumstances. I have kept cows for over forty years, and they have all died by the knife, proving as useful and ornamental in their deaths as in their lives. The starving of animals is so unprofitable, that there is no apology for it. A half starved cow hardly pays her keeping. A well fed one pays a handsome profit.

My recipe for the horn-ail is, one good warm stable well ventilated and well littered, one bushel of carrots or sugar beets daily, hay and water ad libitum, one card or curry-comb, and gentle treatment. I have never known this dose to fail of preventing the disease.

Hookertown, Apr. 10th, 1862. } Yours to command, TIMOTHY BUNKER, Esq.

The Best Team for the Farm.

We have three kinds in extensive and very general use in different parts of the country: the mule on the cotton and sugar plantations; horses on the prairies and smooth farms of the western and middle States; and oxen in New-England and on rough uneven farms generally in the Northern States.

So far as the plantation team is concerned, there is little room to doubt that the mule is the best animal. He is more hardy, and will bare that abuse which is inseparable from the forced labor of the South, better than the ox or the horse. Neat stock are short lived in the Gulf States, perhaps quite as much from scant forage as from the peculiarities of the climate. Tradition says that "a mule is never known to die upon the plantation," which is probably a strong way of stating their longevity. They endure the heat as well as the negroes, and are well adapted to slave drivers. It is a question if more mules might not be profitably worked upon northern farms. Most of the mules are raised in Kentucky, and in the States further north, and possibly if there were not so great a demand for them on the plantation they would be more frequently seen upon the farm. Pride probably has as much to do as profit with the general disuse of the mule at the north. He does not look

as well as the horse, has less sagacity and speed, and is thought to be more vicious. It may be said in favor of mules that they thrive on much plainer food, and are strong and swift enough for most farm purposes. They are excellent draft animals. Most of the carting in New Orleans and other southern cities is done by them.

Much has been said upon the comparative merits of the horse and ox, for the northern farm, and each has its strong advocates. Neither can be shown to be best for all kinds of land. In behalf of the ox it is said, that he is slower than the horse, and so is better adapted to carting over very rough roads and woodlands and to plowing land full of stones and roots. Oxen can be used where horses would tear harnesses and carts all to pieces. The ox also is available for beef, when he has served faithfully in the yoke for eight or ten years. A pair of heavy working cattle, in good condition, are frequently worth quite as much for the butcher as for the farmer. The horse in old age is only good to "trade off," or in case of death, for the crows or the manure heap. The slow motion of the ox which seems to be the strongest argument in his favor, must be against him with all progressive farmers. Rough fields ought to be cleared of rocks and stumps so as to make room for the plow, the mowing machine and the reaper. With a farm in the condition in which it can be most economically cultivated, a horse team is the most profitable. Their quickness of motion is a very great advantage, and in the course of the year shows many dollars gain in the saving of time. On the road a horse team travels nearly twice as fast as an ox team. In plowing, a pair of horses will plow as much in two days as a yoke of cattle of the same weight will in three days. The horses also will stand the heat much better.

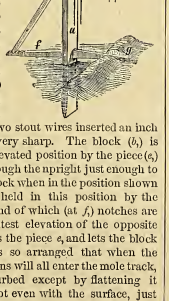
Contrary to the general impression, too, we believe that the horse is more cheaply kept than the ox. Where there is occasion to keep the animals in the stable and to feed with hay and grain, as is generally the case where the teams are kept constantly at work, the horse is the less expensive animal. The experiments to which we have access go to show this. In plowing and tillage the work is much better done by the horse. In turning the furrow over rapidly the soil is broken up more finely and lies lighter, making a fine seed bed. All the tillage necessary for corn and potatoes in clean land can be performed with the horse. He is altogether the nobler animal, and exerts a refining influence upon his lord and master.

Mule Raising.

Whatever may be said of the esthetics of mule raising, there is but one side to be taken in regard to the profitableness of it if wisely managed. Let us look at a few facts. Mules are hardier, cost less to keep than horses, are sold unbroken, and are ready for market the Fall after they are 2 years old. They are driven to market in droves and sold like cattle; that is, the buyer has no recourse, as in case of horses, if he finds the mule lame, foundered, balky, or 'dead—unless gross deception be practiced, and the price paid is clearly money obtained on false pretences. They are always marketable, having a definite value, and a ready sale, as much so as neat cattle or sheep, and even halt and maimed animals bring a proportionate price. It is not an uncommon thing to hear a man say when remonstrated with for working a crippled mule—"It will out-work any horse I have got." Allow that at two years old, a mule and a colt of like age have cost the breeder the same sum. The mule is ready for market, or nearly so and he is worth 20 to 25 per cent. more than the horse.—Price of mules will average fully 20 per cent. higher than horses. At a year and-a-half old the mule may be put to light work without injury and rather to advantage, and from that time on may earn his own living at least. The horse is salable at 5 years old, but not then unless he is broken. He can not be put to work of any kind much before four years old; and during all this time his breeder has to run the risk of accidents, sickness, bad breaking, and luck in marketing. There are several other important considerations. Many a mare which brings inferior colts will produce mules of very salable quality, and yet the finer the mare, other things being equal, the better mules she foals. Many Kentucky and Tennessee farmers have long used *thorough bred* mares for mule breeding, and their mule stock is exceedingly fine. The excellence of the Jack is not less essential to marked success, though as already stated, any and every mule finds his market and that, too, without "jockying." The Superintendent of the Sixth Avenue Railroad in this City states that in employing mule labor there is a saving of 3 per cent. in casualties, 12½ per cent. in keeping, and 25 per cent. in shoeing. Still, we believe, for some cause the trial of mules upon this and other city railroads, resulted unfavorably to their continued use. Mules are adapted to work on level ground, for they can not hold back well, and except as saddle beasts will never be much used in hilly countries.

A First-rate Mole Trap.

We have received several mole traps, and models of traps, for catching these vermin, among all of which the one represented below appears the most simple and practical. An upright piece (a,) 1 x 3 inches, and 2½ to 3 feet long, sharpened so as to be driven firmly into the ground, sustains a heavy oak block (b,) attached to it by two wooden clamps (c,) which allow it to slide with great freedom up and down. Nailed on the block is a cross-piece (d,) 10 inches long and two wide, which has at each end two stout wires inserted an inch apart and made very sharp. The block (b,) is sustained in an elevated position by the piece (e,) which passes through the upright just enough to catch upon the block when in the position shown in the cut. It is held in this position by the piece f g, in one end of which (at f,) notches are cut, and the slightest elevation of the opposite end (g,) disengages the piece e, and lets the block fall. The trap is so arranged that when the block drops the pins will all enter the mole track, which is undisturbed except by flattening it down with the foot even with the surface, just at the point where the end g, of the piece f g, will come. The block is lowered once or twice so as to be sure that the pins will penetrate the soil without difficulty. The trap is then set, and



g just touches the ground where it is trodden down over the mole track. The block must have a fall of 12 to 14 inches. The pieces e, and f g, are each about 15 inches long, and made very light. The slightest lifting at g, will throw e out of the notch in f, and let the block fall. The mole approaching from either direction, raises the ground before him, springs the trap, and the points will most surely pierce his body. Experiments have proved that the best distance apart for the pairs of wires, is 9 inches, letting them enter the ground about 4½ inches from the trip g. The block b is a piece of rough scantling, with the piece c, nailed on. The whole is easily and quickly made. For this plan we are indebted to Mr. W. Norton of Mercer Co., N. J., who has used it with entire success for several years.

A few Hints about Plowing.

For some time past we have been waiting to give in the *Agriculturist*, promised essays on plows and plowing; but those best able to discuss the subject, scientifically as well as practically, are still too busy otherwise, to make the requisite drawings to illustrate the principles, and to go into a thorough treatment of the subject. (We have plowed a good deal of land, and think we could teach some of our readers could we get them with us into the field and teach by example.) While waiting for what we desire to get from others, let us offer a hint or two.

The object of plowing is to break up, to pulverize the soil—*to make it as fine as possible.* That plow is not always the best which will turn over the neatest furrow. To merely invert the surface layer, or shift the position of the soil in masses, or in furrow slices, with the least expenditure of team power, is not the only end to be sought for. Some of the old-fashioned moldboards will often stir the soil better than the newer patterns that show the least strain upon the dynamometer. For sod-land, and where the surface is not pretty clean, it is generally desirable, however, to turn the furrow neatly over. The grass, weeds, etc., being well buried, the pulverizing of the surface can be done with the harrow or cultivator.

Clay soils, or heavy loams, should never be plowed when wet enough to pack, mortar like: the great desideratum is to loosen the soil for the admission of air and warmth. Light sandy soils, on the contrary, may sometimes be benefitted by plowing them when wet.

Very deep plowing is not always advisable, except by subsoiling. The truth is, nearly all soils are poisonous to plants until after they are exposed to the action of air and frost. Many a man—once a skim-plower running the share but three or four inches deep—has got it into his head that the deep-plowing men are right. He goes home, doubles his team, and at once puts down the plow twice as deep as ever it went before. The consequence is, he turns up a mass of *raw* material, and the next crop is nearly or quite a failure. He, and his neighbors, at once eschew all the new-fangled notions, sink back into the old routine, and there is an end to all further attempt at improvements in that neighborhood. But had there been an inch or so of the raw soil turned up for each successive crop, and the tilth been gradually deepened year by year, the evil consequences would have been averted, and in a brief period, five or six years—the plow, the air, and the frost working together—the most happy results would have followed. The roots of the grass, of the corn, of the wheat

and of other crops would have found a lodgement below the temporary surface influence of parching suns, and find access to unfailing supplies of moisture and nutriment.

Fall plowing, to turn up the lower soil, and expose it to freezing and air during Winter, acts like a charm on Spring sowings and plantings.

But by far the best means of deepening a soil, is the use of *a subsoil plow.* This implement is very like a common plow, with the upper and main part of the mold-board cut off; or rather it has a low, narrow, lifting flange in place of the mold-board, so set that it lifts and breaks in pieces the soil. It is run in the bottom of the furrow, following the common plow, two teams being required for the operation. It breaks up and pulverizes the subsoil without turning it up to the surface. This admits air, and after a year or two the subsoil is fitted for being brought to the surface. *Such an operation pays on any soil.* It begins to pay on the first crop, and continues to return a very large yearly interest on the cost.

Mr. Mapes strongly recommends a subsoil plow which he claims to have invented or designed. It is called the "lifting" or "mole" plow. To us this seems the poorest kind of an implement for a subsoil plow. It is like a thin double wedge, with a shaft running up to the beam, and its principal effect is to lift up the soil a little and let it partly fall back, without pulverizing it more than the few cracks made. The common subsoil plow, which thoroughly disturbs, breaks up, and pulverizes the subsoil, is doubtless by far the better implement.

Pumpkins Alone and Among Corn.

Doubtless thousands of the readers of the *Agriculturist* regard the corn field as the only place for raising pumpkins. But, however little the harm that pumpkins do the corn—and we believe that in good seasons they produce a quantity of food which much more than counterbalances the evil which they may do—they will yield a much larger and finer product if planted by themselves. Putting the hills 8 feet apart, two or three good shovelfuls of well rotted manure being dropped on the surface and covered by a little earth, the pumpkins will luxuriate in unobstructed sunshine and upon the fat of the land: and when Autumn strips away the leafy covering under which they hide, a golden harvest will be disclosed which will do one's heart good. Low growing, small stalked varieties of corn do not essentially interfere with the ripening of good crops of pumpkins. But if planted with corn they should in no wise interfere with the thorough culture of the corn. A good plan is to drop seed in every other hill, in alternate rows, and it is very important to secure good seed. The medium sized, round dark orange colored, fine grained varieties are best, and usually the earliest, most prolific, and the best keepers. The cheese pumpkin is preferable for family use or for market.

Field Beans with Corn.

One of the crops used to fill out corn, when it grows scantily, or has altogether failed in hills or spots, is the white bush bean. There is wisdom in the selection. The leguminous and cereal crops are considered so essentially dissimilar in their drafts upon the soil, that they are adapted to follow each other in any rotation. So far as we are aware, experience has not yet discovered that corn suffers essentially, if at all, for having a large crop of beans grown at the same time upon the soil. A heavier draft is, of course, made upon the *soil* if a large crop, be taken off. It is a common practice in some good farming communities, to drop a few beans on the south side of every corn hill having less than three stalks. Another method is the following: The corn being in hills equally distant, in rows running both ways, at the second hoeing, after plowing or running the weeder both ways, plant beans between the hills in the rows running one way. Others plant similarly at the same time that the corn is planted.

Beans cultivated by themselves are a very profitable crop, not exhausting to the soil, and an admirable food for sheep. They uniformly bring a remunerative price, and are sometimes very high and in great demand. They do best on good corn land, not richly manured, in rows 2½ feet apart, kept well weeded and hoed.

Tobacco Cultivation—No. III.

The farmer who cultivates this crop, if he would succeed, must stand ready at all times to neglect every thing else for it. It must have the choice manure of the farm, and when the time comes to transplant, the tobacco must be set, if the weather favors, no matter what stands in the way; then the plants killed by grubs, or those that fall from other causes, must be renewed immediately, and the regular tillage of the soil, and weeding, must suffer no interruption. Soon the worms begin to appear, and as the plants grow they multiply; they find more hiding places, and doubtless more escape the eye of the cultivator. Neglect of them is fatal to success, and the tattered, worm-eaten leaves show a single day's neglect. As the plant approaches maturity, the topping, suckering, and the never ceasing worming, demand of the cultivator unceasing watchfulness and activity; and finally, when the plant is nearly ready to be cut, and day after day adds to its value, up to the very latest time before a frost would ruin it, all hands must be held ready to leave every thing else to harvest the tobacco. The culture is disagreeable work after the plants attain any considerable size, and at all times requires the eye if not the hand of the master.

The tobacco cultivator is subject to one very great temptation, to which if he yield, he permanently damages his farm. The worn-out tobacco lands of Virginia, Maryland, and Kentucky testify to the ruin sure to follow in the wake of the shiftless culture of the weed. Throughout those tobacco-growing regions with which we are acquainted, as a general rule, beside the fine looking tobacco field, stands the half-starved corn. The hill-sides wave with rye, or lie bare in fallows, waiting the revolving cycle when they will again be able to bear a crop of rye or buckwheat. Three-quarters of all the manure made on the farm, and very often all of it, is applied to the tobacco-field, and year after year it is planted upon the self-same plot, and is depended upon as the only source of ready money. As a system of transferring the wealth of the land to the banks, railroad and insurance companies, this works well. The errors of such a system are so patent that it is a wonder any one follows it, but the temptation is great.

When the tobacco crop takes its place in any systematic *rotation*, following some hoed crop, it may be of very great utility and profit to the farmer, and gradually he will be able to increase the land cultivated, and still have manure enough, and not rob the rest of the farm either. Under all circumstances then, we are prompted to ask each tobacco raiser: May you not cultivate other crops with less risk and equal profit, if you devote the same labor and care to them? Lima beans, peas first and cabbages to follow, early potatoes followed by cabbages, and other crops which might be named, are worthy of careful consideration.

But if tobacco is to be raised, by all means do it thoroughly. Early in May, or before, manure and plow deeply, and if any portion of the subsoil is brought up by this operation, apply and work in to the surface a good dressing of wood ashes. The plant demands and withdraws from the soil a large proportion of potash; and besides, this is one of the very best ameliorators of soil which has not been exposed to the action of the air. The manures desirable are: barn yard manure, rich composts of any kind, bones in any form, home-made poudrette, hog manure, etc. Guano is not desirable, except perhaps in very small quantities, as it affects the color of the ash, and perhaps the color of the cured leaf unfavorably. A light dressing of salt or lime, or of both, on the surface is productive of good results, but avoid heavy applications.

The ground thus well prepared as for a corn or root crop, but richer, remains until after the 10th of June when we may expect settled hot weather soon to come. It is then harrowed thoroughly, or lightly plowed, and harrowed, and rolled, marked out in rows three or three and-a-half feet apart, and the first cloudy or rainy day after the 15th of June, the plants are set three feet apart, or even nearer in the rows.

It is the practice of some tobacco cultivators, and on some land it is desirable, to plow in or harrow in about a third part of the manure when the land is worked in June; others set out the plants, manuring "in the hill" with poudrette, superphosphate, etc.; and others make no further addition of manure after the ground is once well prepared as we have described.

Young plants in the seed bed may be brought forward very much by occasional waterings at evening, with weak guano water or other liquid manure.

Hints on Corn Planting.

"One swallow don't make it Summer," and a few pleasant days do not make it corn planting time. Early planted corn is very apt to fall, to rot in the ground, to become the prey of birds, squirrels and mice, to be cut by the grubs, or to be checked or killed by frosts. Corn needs the hot, moist weather of the last of May, or first of June, to bring it forward rapidly and vigorously. The rhyme of some old almanac has grown into an adage,

"Sée your corn field in May, you'll turn sighing away
But see it in June, and you'll sing a tune."

Or another version of the same idea is:

"Your corn in May will make you pray,
When you see it in June, then you'll sing a tune."

The doctrine often stated that corn makes roots in May, is an error, so far as it conveys the idea that corn will make roots faster or better in cold rainy weather than in warm; but correct if it only inculcates the desirableness of planting so that the corn shall be just breaking through the ground and ready to take advantage of the first hot weather. Corn planted early in May, and struggling for life during the first three weeks of its existence, will be completely outstripped by that which is planted two weeks later. The late planted will be evener, larger, and more productive; and we presume also, just

as early; although in regard to this latter point it is true that an inferior plant will often ripen what seed it bears earlier than one which takes a better hold of the soil, and remains green and growing a longer time. Corn planted north of lat. 41° before the middle of May ought not to be much soaked. There is too much danger of a cold rain setting in which will cause the seed to rot in the ground. But planted during or after the third week in May, it is commonly safe enough to soak it. If it be soaked in water containing blue vitriol, seeds of smut will be destroyed. A good plan is to use common pine tar, (not coal tar,) dissolving a quart of tar to a gallon of warm water, and stirring the corn in the fluid. Then dry it with plaster; a small quantity of lime may well be added to the plaster, to destroy any smut. This preparation is not only a fertilizer, but renders the seed distasteful to crows, blackbirds, squirrels, etc.

Corn planting implements are very desirable, and labor-saving. Billing's planter is one of the oldest and best. It plants corn in hills or drills at distances varying within certain limits, drops a fertilizer in the hill if that be desired, and at the same time plants beans between the hills and without manure, if it be arranged for this purpose. There are doubtless other corn planters, perhaps equally good or better, but with this we are more familiar. It is seldom worth while to plant field corn before the 15th of May, north of this latitude, and at the far north it is seldom possible. We advise planting all varieties of *flint* corn (that is the white, and yellow, or red 8 or 10 rowed varieties which are the common field corn of the northeastern States) in drills so that when finally thinned out, it shall average about one stalk to 10 inches—the drills 3 to 3½ feet or more apart, according to the kind of corn. Manure applied in the hills or drills is often of marked benefit, and very small quantities are often quite as effective as larger. Even soaking the seed in water containing nitre, or nitrate of soda, has a great effect. Stall manure applied on the surface, and harrowed in, is most available to the corn crop, whether the soil be deep or shallow, rich or poor, hard or mellow. On very sandy land, lightly plowing it in, is better than harrowing.

Sorghum Syrup Produced at the far North.

Our call for information in regard to the culture of the Chinese sugar cane above latitude 44° is responded to by a subscriber to the *Agriculturist*, in southern Minnesota, whose experience is instructive. He writes: "I have experimented with sorghum for three seasons. The first year I made eighteen gallons of miserably poor molasses from one fourth of an acre of cane so nearly ripe that about one seed in twenty would grow. The second year I made fifty gallons, good, bad, and indifferent, from half an acre of perfectly green canes, not a seed colored and many seed heads were not in sight. Last year I made of entirely unripe canes, beautiful molasses, needing no 'refining,' at the rate of one hundred gallons per acre. My practice is, to keep everything clean; to grind the canes as soon as cut, and boil the juice speedily, in a shallow vessel; to reject all purifiers, especially alkalies; to remove the green coloring matter which gives the unpleasant flavor, by frequent strainings and thorough skimming. Having ascertained that with the rudest kind of apparatus, *prime* molasses can be made from unripe canes, I intend next season to plant several acres, and procure better apparatus for manufacturing the syrup. At half the present prices of 'sweetening,' it is the most profitable business to which we can apply our industry, here in Southern Minnesota." WM. M. BUNNELL.

Timothy Mowing Lands.

Timothy is a poor pasture grass. That every body knows. The close browsing herd will soon rid a field of it, except in the hedge rows where they can not crop close. The reason of this is not because the root is somewhat bulbous, for we can not understand why that should affect it one way or another, but the fact is that the dormant buds at the crown of the root or the base of the stem need the influence of some foliage to cause them to start. The root alone is very likely to be unable to produce another vigorous shoot, and so it dies, or is greatly injured. Thus it is the very worst policy to let cattle of any kind closely feed down Timothy meadows at any time of the year, and particularly in Spring where the full vigor of the root should go to the unimpeded development of the plant. Timothy appears to receive more of a shock from cutting than almost any other of our common grasses, and almost uniformly makes a poor aftermath. A dressing of manure upon Timothy mowings immediately after haying, seems to counteract this evil. Not only may a good aftermath of Timothy be secured, but all other grasses, so far as we know, are more benefitted by manuring at this season than at any other. *

Prepared for the American Agriculturist.

Gleaning in Foreign Fields.

BY ELIHU BURRITT.

Utilizing London Sewerage.—One of the greatest works of modern times is proposed for forcing London to give back to the lands that feed it, some compensation in the shape of fertilizing material. The amount of sewerage it has hitherto poured into the Thames from its subterranean arteries, is estimated at 263,667,090 tuns per annum. Its value, in the diluted state, is estimated at 4 cts. per tun, which would make the whole annual volume amount to over $10,000,000. It is proposed to force this up into elevated reservoirs, at some distance from the city, on each side of the river; each reservoir to be 15 feet deep, and cover a space of from 10 to 12 acres. From these it is to be distributed by a system like that of the Croton Waterworks. Any farmer who wishes to turn a fertilizing stream upon his land, will be furnished with a supply pipe, and a meter, to register the amount he draws from the main, for which he is to pay as for gas or Croton Water, at a certain stipulated price. Should this experiment succeed, who knows but that it may cheapen the price of guano in America, by lessening the English demand for that article.

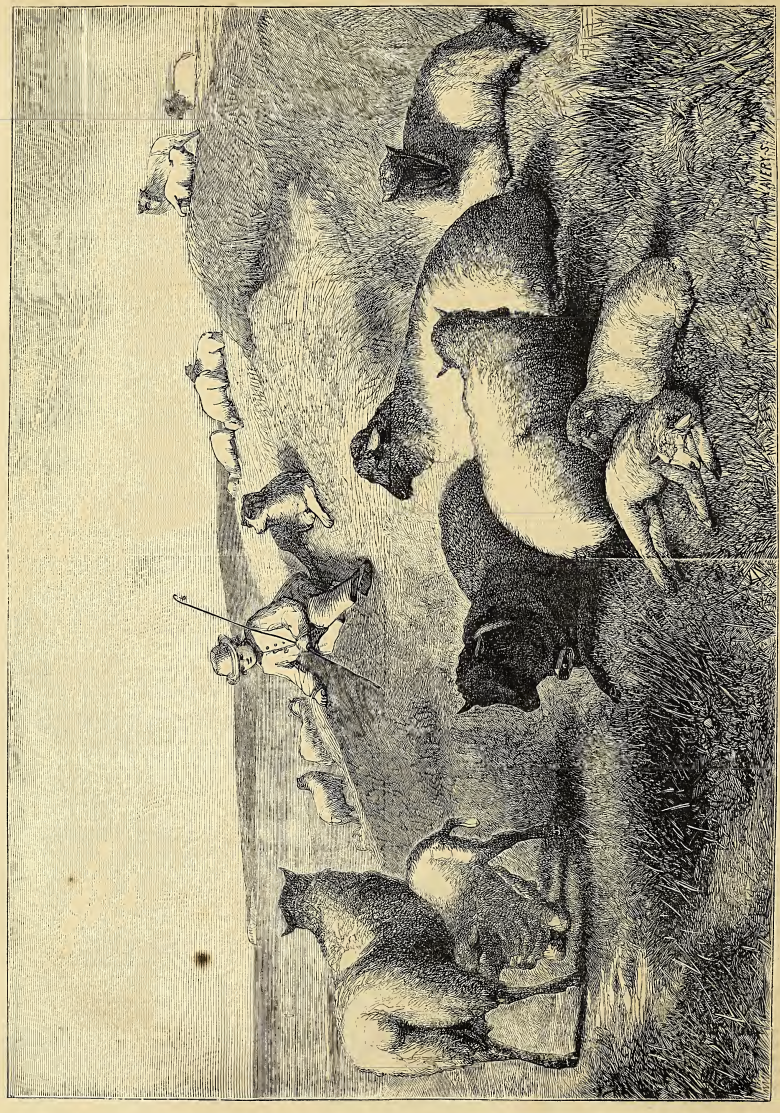
Lecture on Pigs.—*(Illustrated by Specimens.)*—Mr. Stevens, the Prince of the Pig Ring in England, who has taken the highest prizes at the National Exhibitions, recently delivered a lecture on the subject before the Farmers' Club, at Framingham, Suffolk Co. He made a grand *entree* into the town with a procession of ornamental cars, containing living specimens of the White Suffolk, his favorite breed. These were introduced into the hall, and behaved with much decorum, and showed good breeding as well as breed. Specimens of the feeding troughs, and of the pens, were also exhibited. In his address he advised making the floors of asphalte, and keeping the pigs warm and dry, washing and scrubbing them frequently, feeding them with warm food, etc. To prevent the sows crushing the pigs by lying down on them, he placed a railing around the inside of the pen, from 9 to 12 inches high, and about a foot from the wall, so that the pigs could pass between the sow and the wall without any danger of being hurt. To prevent the sow eating her pigs, he had their side teeth nipped out, when they were three or four days old, in case they projected. This put a stop to their biting the sow, and being bitten in return. Mr. Stevens thought he had reached the extreme point of progress, in producing pigs weighing 200 lbs., when five months old. Many an American farmer can tell a larger story than that. Why would it not be a good and proper thing to challenge Uncle John Bull to meet Brother Jonathan in the lists of cattle, sheep, and swine next Christmas? We doubt if he could turn out a bullock in the Three Kingdoms that would outweigh John Sanderson's ox. (And it is a question if we can next Christmas.—ED.)

Agricultural Machinery.—Those Americans who visited the Great Exhibition in London in 1851, will remember how meagre, at first sight, was the show of American art and genius, as compared with the contributions of some other countries. They well remember the satires of *Punch*, and the ponderous wit of the London Times, at our expense. They will remember with what supercilious distrust the American Mowing Machine was peered at, even by English farmers; how backward they were even to allow it to be tried on their fields. But, before that Crystal Palace was taken down, the London Times had the grace to admit, that if nothing else but the American Mowing Machine had been brought to the notice of Europe in that grand edifice, its expense would have been well repaid. In 1859, it is stated, that 4,000 reaping machines were at work during harvest, in England, capable of cutting more in a day than 40,000 able-bodied laborers.

Curious Manurial Estimates.—Professors Hembstadt and Schubler recently brought out an interesting table, showing the comparative virtues of different fertilizers, which the farmers might work at with profit. It is assumed that ordinary land without manure will produce a crop of grain equal to 3 times the seed sown; manured with herbage, grass leaves, etc., 5 times; cow dung, 7; pigeon's dung, 9; horse dung, 10; sheep's dung, 12; human urine, 12; human manure or bullock's blood, 14. The last, consequently, is the best fertilizer in the world. It has been estimated that a single individual produces 500 lbs. of urine per annum, which Prof. Johnston shows is worth $50 per tun. A village of 1000 inhabitants would consequently produce 250 tuns in a year, which would be worth, at this rate, more than $10,000. The population of New-York and Brooklyn would furnish annually for country farms $10,000,000 worth of this fertilizing material, *if* it could all be saved for that purpose.

Bee Culture.—Austria would seem, from authentic accounts, to be ahead of all other countries in bee-culture. The annual production, in honey and wax, is valued at $15,000,000. Hungary leads all the other departments of the empire, producing 90,000 quintals (100 lb.) of honey annually; Gelicia comes next, with 80,000 quintals; Transylvania, 50,000; while Upper Austria yields only 1,800. The total number of bee-hives is put at 2,733,000; averaging 270 to the square mile. If there were as many cows to the square mile, truly Austria might be regarded a land flowing with milk and honey.

Winter Irrigation in Italy.—This is an operation of great importance to Italian farmers. The right to water their meadows begins on the 8th of September, and ends on the 25th of March. The constant passage of the water over the roots of the grass stimulates the growth, but it also carries off a considerable portion of surface soil, rendering it necessary to make up this exhaustion by manuring the meadows twice a year. Five crops of grass are generally obtained on them in a year. To prepare them costs from $50 to $60 per acre, and the annual produce gives a profit of about $30. Others, near Milan, yield twice this quantity, as they are cut in November, January, March, and April, for stall feeding; and in June, July, and August, give three crops of hay, with abundant pasturage for September. They thus give seven crops a year, and the annual yield is immense.



SHEEP TENDING.—From a Painting by H. Brittan Wills, London.—*Engraved for the American Agriculturist.*

For the American Agriculturist.

Spare the Sprouts.

The grafts are set, and the sprouts are starting just below them—the effort of nature to restore the balance between top and roots, that has been destroyed by the grafting process. This balance is of much more importance than most people imagine. In a healthy tree it is always maintained. If important branches are lopped off, sprouts start immediately below to repair the loss. If small branches die, it is an indication of more wood than the roots can support.

In grafting trees of good size, ten years or more from the seed, not more than a third of the top should be taken off at once. The grafts will do much better if the lower limbs are left whole. Buds for new sprouts will start soon after the buds upon the cions, and there is a strong temptation to rub them off upon the supposition that more of the sap will be thrown into the graft. But this philosophy is wrong. Every leaf acts as a pump, and the sap drawn up, other things being equal, will be according to the number and vigor of the leaves. These sprouts should be left until the middle of the growing season at least, and then be removed gradually, leaving two or three sprouts in the case of the most vigorous trees to the second season. If the cions do not grow it is still more important that the sprouts should remain. JONATHAN.

How to Set Trees in an Orchard.

The common way is to set them in squares (fig. 1,) in the intersections of lines crossing the field, equally distant both ways. Thus each four contiguous trees form a square. The trees may be set at any desired distance apart—25, 30, and 35 feet are common distances. The advantage of this method is, that though the ground is not so perfectly occupied as it might be, still it is easier to plow between the rows. When it is desired to occupy the land still more thoroughly, or to place two sorts of trees upon it—one kind to be removed if necessary, as the others grow—dwarfs or other trees are set in the middle of each square, thus: This is confounded with the "*Quincunx*" system, (fig. 2,) in which the trees may be regarded as in *fives*, also: but not in squares. The Quincunx might with more propriety be called the Hexagonal system, for each tree is surrounded by six others at equal distance both from the center one, and each other. By this plan more trees can be set upon an acre than by the other, the distance between the trees being the same. The land can not be so conveniently plowed.

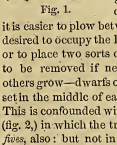


Fig. 1.

To lay out an orchard on the Quincunx system, the following rule may be given: Two distances of rows are required. The *first* is the required distance of the trees, 25, 30, 35, or 40 feet. The *second* is obtained by multiplying the first by 1.732, and cutting off the right hand three figures for decimals. *For example*, if the distance of the trees apart is to be 30 feet, then 30 multiplied by 1.732, gives 51.960 feet, or very nearly 52 feet, the distance of the rows the other way. Now lay off rows across the field one way 30 feet, and the other way, 52 feet, and plant trees at the intersections of the rows. Next draw a second set of rows, *each way*, just mid-way between the rows already planted. At each point where these *new* lines cross, put another tree, and you then have the trees all 30 feet distant from each other, but there are fully one-seventh more trees than if they had been set in rows 30 feet each way. The whole marking out may be done before beginning to plant. The above rule is a general one. If trees are desired 35 feet apart, 35 multiplied by 1.732, equals 60,620, or 60⅔ feet for the distance of the cross-rows. If the distance be 40 feet, the second or cross-rows will be about 69¼ feet, (69,280). The number 1.732 is very nearly the square root of 3, and is a "constant" for all distances of rows.

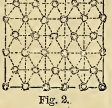


Fig. 2.

About Quinces.

Here is one of the old-fashioned fruits which deserves all that has ever been said in its praise. It is known botanically, as *Cydonia*, from the city Cydon, in Crete, where it seems to have first attracted attention. As a stock on which to graft the apple and pear, it has become quite serviceable, giving the fruit great precocity, increased size and improved flavor. Then, who does not know by experience that its own fruit when stewed, or mixed with apples in pies and tarts, makes a palatable dish? Says an old gardening author: "When apples are flat, and have lost their flavor, a quince or two, in a pie or pudding, adds a quickness to them. In medicine the expressed juice, repeatedly taken in small quantities, is cooling, astringent and stomachic." Quinces, says Columella, not only yield pleasure, but health." To make a first-rate apple pie, use one fourth quinces sliced with three fourths apples, and add a few thin slices of candied lemon-peel or citron, and more than a simple allusion to the delicious preserves, jellies, and marmalades made from the fruit in its purity, is simply an aggravation.

From the kitchen, let us now go to the garden. The quince may be propagated by cuttings or layers. The cuttings are prepared in the same way as for grapes, they should be set out in a deep, light, well-worked soil; if a little shaded, success will be the more certain. Let the rows be eighteen inches apart, and the plants six or eight inches apart in the row. Keep the ground well stirred during the Summer, and mulched in very dry weather. Layering is much practiced, and is a surer method than by cuttings. Shoots are bent down, slightly cut, and covered with earth. Another method is to earth up the mother plants in the Spring: shoots will spring up from the old stocks, with roots attached.

In setting out the young plants in their final position, place them ten feet apart, and give them the best culture. As the quince is often found will by the side of streams, it has been supposed by some that it needs a damp soil, and it is often set in the lowest and poorest part of the garden. A mistaken practice. Give it an open situation, a deep soil, and let the ground be surface manured every other year. The fruit will be abundant and large and fair, instead of scanty and knotty, as seen in its wild condition. Bushes well planted, and generously treated, will begin to bear fruit the third year, and will yield good crops for thirty years. First class specimens will bring two cents a piece in New-York market. Few crops are more profitable. The only pruning required is to cut out the old, and twisted or decaying branches. In addition to the manure, give an annual dressing of salt, just enough to whiten the surface.

There are only two varieties extensively cultivated, viz: the Apple or Orange quince, and the Pear-shaped. The first is the most popular, as it bears abundant, fair, orange colored fruit. The second is shaped like a pear, is dryer and firmer than the other. It does not become as tender, when cooked, as the other, but ripens a fortnight later, and keeps longer into the winter.

(PRIZE ARTICLE.)

The Apple Orchard.

BY ISAAC HICKS, NORTH HEMPSTEAD, N. Y.

It is generally admitted that, in all the older settled parts of the country, apple trees do not flourish as well as when the soil was new and not exhausted by repeated croppings, with a scanty return of manure to compensate the loss. Unless we fully determine to have an orchard that will remunerate both in profit and pleasure, and to which all other crops are a secondary consideration, we had better not undertake the business. The orchard is to be a *permanent* institution, at least for a life time. The best field on the farm is just the place for it to ensure the greatest results; and if it can be located near the house too, so as to be easy of access, all the better; for then it will receive more of the owner's attention and much labor will be spared in traveling to and fro for fruit—especially for Summer apples, which I recommend to be planted in the part of the orchard nearest to the house. A sheltered position from the northerly winds, with a forest, hedge, or hill in the rear, will often save part of the blossoms from frost and prevent the fruit from being blown off and lost. Generally a southern slope is best, and if nearly level and free from stones, it will be worked with greater ease. It is not to be expected that all these advantages can be secured by every one, but secure as many as you can. A medium soil that is not dry and sandy—parching up in the Summer drouths—nor too wet, in which water stands part of the year, but on which corn and potatoes flourish in perfection, is as near right as can be selected. And if we plant an orchard succeeding one of these hoed crops, the ground will be in the very best condition for transplanting. The finely worked soil is nicely adapted to filling in around the roots, and enables the rootlets to extract their food with ease, which they can not readily do if the earth is in a lumpy and hard condition. It is so important to have the ground in the best condition before planting, that it is better to defer the work until the ground is ready, than to plant in a stiff soil or with wheat, rye, barley, or oats on the ground. If the soil is light and sandy, make the holes twice the usual size and fill up with loam and sods if practicable, and spread a mulch for a distance of two or three feet around the tree to protect it from the scorching rays of the sun. On the contrary, if too wet, or if water stands on the ground, or if the subsoil is a heavy clay, it should be thoroughly drained before planting. If planted in a soil where each hole is like a miniature cistern, it is evident that the tree can not grow. It is recommended, in some wet soils, to place the tree on the surface and cover it up leaving it to grow on a small hillock. This is only admissible where soils can not be drained successfully, for the trees will not take good hold with their roots, and are more liable to be torn up by the winds. The practice of placing trees in little hollows, with the idea that they will catch the rain and be more moist, is erroneous, for repeated plowings in a few years fill up the holes, and the trees cease to grow from being set too deep in the earth. Apple trees send their lower roots deep down in the soil to absorb moisture from thence, and other roots rise near the sur-

face for air and food. Hence if these roots are too low in a wet, cold soil, the tree is robbed of part of the important elements of growth, it dwindles away and prematurely dies. Tenfold more trees are planted too deep than not deep enough, and if too deep at first they soon become more so, as most cultivators will plow more furrows towards the tree than away from it. Subsoiling before planting will be of advantage to almost all soils.

SELECTION AND PREPARATION OF TREES.

Every purchaser should, if practicable, make his own selection of trees to be planted, and not trust to the promiscuous collections of a tree peddler of whose knowledge or fidelity he has no assurance. Trees of the same kind vary much in the nursery rows; some are worth double as much as others for form and thriftiness, and if the purchaser attends to it himself he knows what he is getting. In purchasing largely at the leading nurseries a discount of ¼ to ½ can be saved from the prices asked by peddlers. Trees of healthy growth, with well formed heads, good roots, and true to name (a very important item), will, in after years, save much labor in pruning, give more satisfaction always, and amply repay the extra labor and expense in procuring them. Four or five years from bud or graft, if they have not been forced ahead too fast, or where it is no great object to save freight, from 7 to 8 feet in height is, I think, the proper size; but if they have to be conveyed a long distance, smaller and younger trees will be preferred. Before planting, cut out all superfluous branches and twigs, leaving three or four main branches to form a head. If the tree has fine roots, with a few main ones as braces, the top will require little or no cutting back. The top must be in proportion to the amount of roots. The buds of the previous year's growth give much larger leaves than older wood, we therefore cut but little off unless the roots are scanty. As the larger roots of trees are almost always cut off roughly by the spade in digging, their ends should be trimmed off smoothly before planting; a mass of small roots will spring from the end, much assisting the tree in its hold upon the ground. It should always be our special care to secure the most roots possible upon the trees we purchase, and to have them in the best order, for the after growth much depends upon this.

PLANTING.

There are two methods of planting, one the regular square in which the trees should be 30 feet apart, and the other called quincunx, or 5 to the square. The latter gives more trees to the acre; they will be 27 feet apart. Some varieties form much larger and wider spreading heads than others, and if the cultivator will take the pains to ascertain the manner of growth of the kinds of apple trees he plants, the distance between the trees may be varied somewhat to advantage. After the distance is staked, if the ground be mellow, mark it out with a plow each way, and plant the trees at the intersections. If in the quincunx form, mark 30 feet each way and plant at every other crossing of the plow. Having made our selection and marked out the ground, we proceed to dig the holes for their reception so that they may be planted with as little delay and exposure as possible. For although the apple is a very hardy tree, drying and exposure to cold winds will check their leafing out and their growth the first year. Dig the holes about 3 feet across, taking out the surface soil and keeping it separate from the subsoil. Two spades in depth is sufficient; then the sods, if there are any, and surface soil should be thrown in until the tree can be placed at the same depth it grew. Next throw in good friable surface soil carefully around the roots, placing them in the same position they originally grew, and gently shake the tree sidewise. A few minutes' attention to the proper placing the roots, working the earth between the roots with the fingers if necessary, will pay for the trouble. Lifting the tree up and down like churning is not a good practice, as the dirt falls in at the end of the roots, misplacing them in an arching manner. To insure a quick growth, the rootlets must have good food in the soil, and hence the necessity, whatever the surrounding soil may be, that good rich earth should be in contact with them. Well rotted manure or compost may be placed in the holes, but not in contact with the roots, and then covered with soil and firmly trod down. Two persons are needed to plant a tree properly, one to hold it and the other to fill in the dirt. No fresh or unfermented manure should be placed under or around the roots of the tree; always put it on the surface. As we need more surface soil than we dig out of the hole, it may be taken from near the heap of subsoil, and when the planting is done the subsoil is put into the hole made by its removal. The best time for transplanting is when the best attention can be given to it. If properly done there is little difference between Fall and Spring. Probably the tree is more likely to live if there should be a drouth the succeeding Summer, and its growth be greater, if planted in the Fall. But there is, in ordinary seasons, almost no risk of apple trees living unless grossly neglected. When trees have been brought from a long distance, it will be better to wet them previously, dipping them in water, or pouring water in the holes when planted. If the ground be kept mellow by frequent stirring with hoe, plow, or cultivator, no better mulch can be given the young tree through the season. There is nothing equal to frequently stirring the surface to enable a tree to withstand drouth. [If the root fibers are not touched or disturbed. ED.] But where this can not be done owing to the trees being planted in a grass sod, or among the cereal grain crops, a good mulch of anything that will prevent the moisture from evaporating will be of service. Hay, straw, cornstalks, old weeds, shavings, and leaves, are all good, and it is much better at all times to throw refuse rubbish around trees for a mulch than to burn it up, doing good to no one.

Trees will require more or less pruning until they are grown. We should go over them every year. Spring is the time when most persons have leisure, and if the growth of the tree is properly watched, few or no large branches need ever be removed. The head of the tree should be kept so open that a person can climb up and about without difficulty, and every year as the trees increase in size we may find small branches or shoots which need removing. While the trees are young no tool is needed but the pruning knife. But as they grow out of reach, a saw with the teeth reversed so as to cut with a down stroke and fixed on a long handle is the most convenient. There are many different tools for effecting this object for sale at the agricultural stores, but when one of these can not be procured, a substitute can be made by taking the handle from a common back-saw, the smaller the better, filing the teeth reversed, and fastening it to a pole or hay-fork handle. As to the time of pruning trees, some advise to cut when the knife is sharp. When the limbs are quite small, the best time to trim is whenever we perceive it to be needed. Large limbs heal over much better if removed very late in Spring or early in Summer, and if smoothed over with a knife, they will be covered with new bark in half the time. It is a matter of individual taste whether to trim high, so that the plow can always be run under the boughs, or low, drooping their branches to the ground. Both ways have their advocates and advantages. Many kinds of apple trees, like the Bellflower and Rhode-Island Greening, have such a tendency to droop, that to remove the large branches to prevent it would be a serious loss. For it is seldom that a large branch heals over readily, before the wound decays to the heart. There are some varieties too that scarcely ever droop their branches. Probably the best method would be to keep such trees by themselves, and allow the others, when large, to bend their limbs to the earth, as grass can not grow under such trees, and the ground is, therefore, always mellow.

An orchard, especially before the trees have attained the full size, never should be allowed to be covered with a stiff Timothy or red-top sod. In many parts of the country the injury done to orchards by grass is more than the value of the hay to the farmer, and he had best never undertake to have an orchard, if such is to be his practice. The roots of grass and the cereals, of which rye appears to be the worst, rob the young fibrous roots of their needed food and moisture. All hoed crops are best, and it would be better to alternate them, as potatoes, turnips, etc., one year, and corn the next. When the trees are too large to allow the planting of potatoes to advantage, corn for fodder and occasionally buckwheat may be sown. And when the trees nearly cover the ground, coarse manure should be occasionally spread on the surface and lightly plowed under in the spaces where a plow can go.

But this, as well as the amount of manure required, must be left to the cultivator's judgment, for the amount of nutriment in the soil adapted to the growth of trees varies greatly in different localities, but we know, if the ground be kept sufficiently rich by manuring to grow good corn and potatoes, the trees will get their proper share of it. Trees *may* be forced too much, and become weak and decay prematurely, although it very rarely happens from this cause. An occasional top-dressing with ashes will be beneficial—chips and dirt from the wood-pile, straw, cornstalks, or any refuse vegetable matter may be advantageously thrown under the trees when the plow can not be used.

WHAT VARIETIES TO CULTIVATE.

A very important question is: What varieties shall we plant? It costs no more time or money to raise the best than the poorest apples, and it is a question of some moment to the orchardist whether or not his trees bear apples that will return $5 or $1 per tree annually. There is no doubt that we have varieties enough now suited to each locality, did we only know them. Fruit growers are all aware that a superior variety in one part of our widely extended country is sometimes worthless in another section, and that, as a general rule, those varieties originating in any particular locality are best adapted to the soil and climate of that section. Again there are a few kinds that are deservedly popular nearly every where. Every person designing to plant an orchard should investigate the subject long enough to have a list prepared of those varieties that are adapted to his ground, before he goes to the nurseryman or agent. Nurserymen seldom cultivate an orchard; and as their information is gathered from many different and wide-spread sources, they may honestly recommend an apple to be excellent when it really proves quite an inferior fruit in the place the purchaser resides. Neither can this knowledge be reliably acquired from books, unless the authors describe what are good in each locality. Fruit books are most reliable too in describing the habits and character of fruits in the section of country in which the author resides; as for instance, Elliot for the fertile States of the west. Thomas and Downing for the middle States, and Cole for New England. In the early days of fruit culture many varieties of apples were brought from Europe, but with few exceptions, such as the Gravenstein and Red Astrachan, we now have far better varieties to cultivate originating in our particular sections. The best reference for the inquirer or reader will be found in the lists made out for the *Agriculturist* last year, by 77 different cultivators of fruit in various sections of the United States; and if a selection is made from those that received the largest number of votes, one can hardly go amiss. [See abstract of that list in another column.—ED.]

SUMMER APPLES.—*Early Harvest*, the most popular early tart apple throughout the country, is a slow grower and has the reputation of being short-lived. It should have the best soil and care, or the cultivator will be disappointed in its quality. The *Red Astrachan* is one of the very few foreign apples worthy of cultivation here. A very salable fruit, good bearer, but moderate growth. The *Early Bough* is a fine grower and bearer, and by some preferred as the best tart early sort. *Summer Rose* is excellent, but too small and a slow grower. *Summer Queen* is a good grower and profitable variety. *Summer Hagloe*, slow grower, handsome and profitable for market. Of sweet Summer apples the *Sweet Bough* is the most known. It is a good grower and bearer. *Golden Sweeting* is a better grower and more productive, not as good as the preceding for the table, though profitable for market. *Summer*

Paradise, large and straggling grower, and fine apple.

FALL APPLES.—I place the *Gravenstein* at the head of the list. It is a fine showy fruit-tree, an upright thrifty grower, and good bearer, and very salable. *Holden's Blush* is another pretty sort, and excellent for the table—far better than Hawthornden. *Am. Summer Pearmain*, a superior dessert sort, good bearer, but slow grower, needing a rich soil. *Porter*, a highly esteemed Fall apple, and when not too many on the tree, large and excellent. This is a very salable variety and the tree makes a beautiful growth. The *Rambo* is a fine apple in most places, but fails entirely in others. *Fall Pippin* is a fine old variety, but too uncertain for general culture—some years very fine, and again nearly worthless. Among sweet Fall apples the *Autumn Bough* deserves a place. It is a good grower and productive, excellent both for the table and baking. I have found the *Willis Sweeting* the best baking variety, and when fully ripe fine for the dessert. It is a good grower, and the fruit is in use longer than any other Autumn variety. *Jersey Sweeting* is a better table apple than the preceding, but not as valuable in any other respect. *Cortlet Sweeting* is a very thrifty grower, and is a good baking variety. *Lowell* is a fine grower, and is held in much esteem. *Fall Orange* is a strong grower, and bears very early; the fruit is excellent for stewing and dessert.

WINTER APPLES.—The *Baldwin* appears to have the highest reputation of any Winter apple growing in this country. It is a beautiful thrifty grower, and bears abundantly a rich fine fruit. Its nearest rival, the *Rhode Island Greening*, perhaps is more extensively planted than any other, and adapts itself to nearly every soil, and few need hesitate to plant abundantly of this fine old variety. Among the late keeping sorts the *Roxbury Russet* has the highest reputation. This is a good grower, and bears well. The *Hubbardston Nonsuch* is a large, beautiful fruit, and ripens in the early part of Winter. The tree is a fine grower, and abundant, regular bearer, an excellent, very salable fruit. *Peck's Pleasant* is a profitable variety, resembles the Newtown Pippin in shape, a better grower and bearer, but not its equal in keeping or flavor. The *Esopus Spitzenberg*, *Northern Spy*, *Newtown Pippin*, *Baldtwin*, *Swaar*, and *Vandervere* are most excellent varieties, when perfect. They succeed well in some localities, but are not adapted to all soils and climates. For sweet Winter apples I recommend the *Talman Sweeting* as a fine grower and abundant bearer; the *Ladies Sweeting* is a beautiful spicy fruit, and abundant bearer, but it is not a fast grower; the *Moore Sweeting* for its long keeping and excellent baking qualities; and *Pound Sweeting* for a large sized, productive, and salable variety.

Undoubtedly there are sorts of apples not named in the above lists better adapted to certain localities and soils, and we can not too urgently insist on the importance of those intending to plant an orchard, acquainting themselves with the kinds that have succeeded in their part of the country, and planting very sparingly if at all of those kinds that are unknown, however highly recommended they may be. The experience I have had fully justifies me in giving this advice to others, for many unprofitable trees of varieties good in some places I have been obliged to regrafi. The proportion of Summer, Fall and Winter kinds that should be planted depends upon the purpose and locality of the orchard. If for market chiefly, and accessible to large city, large and showy early apples are the most profitable, either sweet or sour. And if too great a distance to send Summer and Autumn apples to market with safety, large, prolific and well known Winter varieties should be selected. The red apples bear carriage best, as they do not show bruises like light-yellow or white apples, and appear to greater advantage when exposed for sale. Red Astrachan, Gravenstein, Summer Pearmain and the firm yellow Porter, appear well after a long journey. The marketman cares but little for the flavor or name of the fruit, provided it looks well when he receives it. When the orchard is intended chiefly for family use, beauty is not of much value, and smaller, high flavored and delicate apples will be most desirable. A few large coarse apples for stewing, may be allowed, but as a general rule fine flavored, tender fruit, is best for the culinary department too. Early apples seldom retain their flavor or good appearance long after they are picked, and the trees should be frequently visited either for market or for home use.

KEEPING APPLES.

Apples will keep better, if picked a little before they ripen or fall from the tree in Autumn. They should be kept in as cool a temperature as we can find above the freezing point, subject to as little variation as possible. After they are picked in the Fall, place them in a cool dry cellar with a free ventilation of air through it. They should not be covered up nor the barrels headed for two or three weeks after they are gathered, as they must sweat or throw off part of their moisture; if this is checked by close covering, a portion of the fruit will soon decay. If a proper cellar with good ventilation be not accessible, they may be placed on the back side of a building, as liable to vary least in temperature, or in a cool dry room. Those that fall from the tree before the time for picking, and all bruised fruit, should be kept from the sound apples. Various methods have been proposed for keeping apples, such as covering with dry sand, paper, sawdust, etc., but if placed among the fruit before they have sufficiently dried by sweating, they are productive of more harm than good. And no doubt this is the cause why some have succeeded, and others have failed. They did not understand this law. Pears, if placed in tight boxes and covered up soon after picking will ripen, and consequently decay much sooner.

Of the insects that are injurious to apple trees, the orchard or tent caterpillar makes its appearance earliest in the Spring. The female lays her eggs in the Summer, in a circle around the twigs, and if the trees are small, the most expeditious way is to examine the trees in Winter or early Spring and remove these collections of eggs. The eye will soon learn to detect these gummy, dark looking rings, and if destroyed before they hatch, much damage may be saved to the trees when first leafing out. Never let them remain on the tree until grown, as they will prepare much more trouble for the cultivator the succeeding year. Faithfully kept down from the first there will be little trouble afterwards. A pole with nails driven in the end with cloth tied around, or a stiff hair brush inserted in the nest early in the morning, and twisted round, will easily remove them. The injury done by the worm of the apple moth is not so easily prevented. Allowing pigs and cattle to run in the orchard, and eat the fallen fruit, or picking them up frequently and feeding them to the pigs, which is better, will reduce their numbers. For the apple tree borer, there can be no surer remedy than often inspecting the trunk of the trees near the roots for their holes in Autumn, and inserting either the point of a knife or sharp wire ferret out and destroy the enemy in his hiding place. Keep the bark smooth by proper culture, washing with strong soapsuds, or a weak solution of sal soda mixed with wood ashes, if mossy. A little time frequently devoted to careful inspection of the orchard will pay as good if not better interest than any other labor on the farm.

PLOWING ORCHARDS.

Always have the best and most careful plowman perform this business. Oxen are the best, no doubt, but as most farmers do not possess them, use the most steady horses. Plow alternately one year towards the trees, and the next from them. The good plowman will not allow the plow to run deep too near the trees so as to injure the roots, and will have shorter swiffle trees made on purpose to plow the orchard with. When these conditions can not be all secured, it is safer to prevent barking the trees, to leave two or three furrows nearest them, and afterwards finish with one horse and a short swiffle tree. As injury is often done in harrowing among trees, the driver should have a short rope attached to the harrow, to hold in his hand, so that by a pull he can throw it off, if it inadvertently comes near the tree

Best Apples for Different Localities.

It is now well understood that while there are a few good apples that are vigorous growers, and prolific bearers all over the country, yet as a general rule there are varieties which are peculiarly adapted to only limited sections, and in these localities such apples are the best for general cultivation. As the readers of volume 20 remember, we made an effort last year to gather the opinions of competent judges in regard to the best apples. Seventy seven lists were received, most of them from distinguished pomologists, horticultural and agricultural societies, etc. The reports were published in detail in the *Agriculturist* for April, May, and June, 1861. For convenience of reference, and for the benefit of new subscribers, we present below a condensed table of the votes or prefcrences expressed in the whole country, and by sections:

	VOTES GIVEN IN						
	From the whole U. S.	New England.	New York.	N. J., Pa., Md., Del.	Ohio, Indiana, Mich.	Wis., Illinois, Iowa.	Missouri, Ky., Tenn., Minn.
Number of lists received	77	17	17	13	16	9	5
Summer.							
Early Harvest	65	14	17	9	12	8	5
Red Astrachan	48	13	13	7	6	6	3
American Summer Pearm'n.	13	—	1	4	3	4	1
Carolina Red June	11	—	—	—	3	4	4
William's Favorite	9	—	3	—	—	—	—
Early Strawberry	9	—	—	—	—	—	—
Summer Queen	6	—	—	—	4	—	—
Summer Rose	6	—	—	—	—	—	—
Early Joe	5	—	4	—	—	—	—
Benoni	5	—	—	—	1	—	—
Keswick Codlin	5	—	—	—	—	1	—
Primate	3	—	3	—	—	—	—
Sops of Wine	3	3	—	—	—	—	—
Sweet.							
Sweet Bough	50	15	16	8	8	—	3
Golden Sweet	18	6	—	3	8	—	—
High Top	8	—	—	—	—	5	—
Autumn.							
Fall Pippin	42	8	14	5	10	3	2
Porter	35	13	13	5	3	1	—
Gravenstein	35	13	13	—	3	2	2
Rambo	29	—	3	7	12	5	—
Holden's Blush	23	3	—	7	8	3	2
Fameuse	11	4	—	2	2	1	—
Lowell	9	—	—	1	5	3	—
Late Strawberry	8	—	—	—	—	—	—
Hawley	4	—	4	—	—	—	—
Twenty Ounce	4	—	3	—	1	—	—
Smokehouse	4	—	—	—	—	—	—
Fall Wine	4	—	—	—	3	—	—
Holland Pippin	4	—	—	—	—	—	—
Primate	4	—	3	—	—	—	—
Sweet.							
Jersey Sweeting	16	—	7	3	5	—	—
Pumpkin Sweet	9	—	—	—	1	—	—
Autumn Bough	7	—	6	1	—	—	—
Northern Sweet	3	3	—	—	—	—	—
Winter.							
Baldwin	46	17	17	9	3	—	—
R. I. Greening	43	14	12	6	5	—	—
Roxbury Russet	25	11	7	4	2	—	1
Esopus Spitzenberg	20	3	11	1	—	—	—
Yellow Bellflower	14	—	—	—	6	2	—
Northern Spy	14	—	6	3	1	1	1
Hubbardston Nonsuch	13	7	4	1	1	—	—
Rawle's Janet	13	—	—	—	—	—	—
Wine Sap	12	—	—	—	3	4	1
Westfield Seek-no-further	11	—	3	—	3	2	1
Golden Russet	11	—	—	—	3	4	1
Smith's Cider	10	—	—	—	3	3	—
King of Tompkins Co	10	—	6	—	—	—	—
Peck's Pleasant	9	6	—	—	—	—	—
Newtown Pippin	9	—	3	—	—	—	—
Swaar	7	—	4	—	—	—	—
Jonathan	7	—	—	—	1	1	1
Rome Beauty	6	—	—	—	—	—	—
Forwalder	5	—	—	—	—	—	—
Lumber Twig	4	—	—	—	—	—	—
Belmont	4	—	—	—	—	—	—
Ridge Pippin	3	—	3	—	—	—	—
Pryor's Red	3	—	—	—	—	3	—
Sweet.							
Talman Sweeting	24	—	10	—	3	6	—
Ladies Sweeting	21	9	6	4	1	—	1
Broadwell	8	—	—	5	—	—	—

It will be seen that only three or four kinds received even a majority of the whole votes, and that in the different sections of the country, the preferences were considerably varied. Thus of Autumn apples, while 14 out of 17 authorities in New-York voted for the Fall Pippin, it received only 10 out of 16 votes in Ohio, etc. Of the Winter apples, the Baldwin received 17 votes from 17 authorities in New-England, and the same in New-York, while it received no votes at the West; the Yellow Bellflower stands highest there. These votes were from such good authorities that the above lists may be taken as a very fair indication of what are the *best* varieties of apples in the different sections named. A large number of the varieties were recommended, but we omit all that did not receive at least two votes. Each authority gave a list of the best six Winter apples (including 1 sweet), five Autumn varieties, and four Summer varieties. The table gives the total number of votes for each variety—single votes being omitted.

Beautiful Leaved Plants.

All over the world, the lovers of flowers and those who cultivate beautiful plants for the sake of their beauty alone, are now bestowing especial attention upon that large number of plants whose beauty consists in the various tints upon their *foliage*. Especial value being attached to brilliantly variegated leaves, plants exhibiting a tendency to sport in this way are encouraged in various ways to do so, and thus the number is rapidly multiplying. But these unnaturally variegated plants have generally a sickly look, and in fact many are really diseased, while those painted by Nature's hand exhibit a boldness and variety of coloring really startling. Our engraving shows as well as it can be done in black and white, the figuring of the *Sonerila margaritacea*; but beautiful as the cut is, it gives but a poor idea of the real beauty of the plant. The leaves are brilliant green, shading off in stripes into light yellowish green at the points and edges, and covered with pure silvery white dots arranged in rows. The under part of the leaf is light colored, with the veins of a brilliant red, as are also the leaf-stems, and the stalk. It is a native of Java, was introduced into England in 1848, and requires hot-house culture Winter and Summer. It is propagated by cuttings, and has pleasing rose-colored flowers. This beautiful little plant is only one of the multitude of beautiful leafed plants of which we often have something to say in the *Agriculturist*, but we know of none which so well admits of being represented in a wood cut. The beautiful *begonias, draccenas, calladiums, crotons, Cissus discolor*, and others, which are of easy culture, are becoming very common, and are among the most striking green-house ornaments. Besides, we have some *native* plants of great beauty of foliage which may well claim a place with these rare exotics. What is prettier than the ribbon-grass? A variety of the lily of the valley is beautifully striped, and not only do some kinds of ivy show light-colored veins, but some are variegated in white blotches very peculiarly. The horse-shoe geraniums are very brilliantly and regularly colored, as are also many other geraniums.

SONERILA MARGARITACEA.

May-Day Talk About Evergreens.

NEIGHBOR.—Good morning, my friend. True to my word, I have called for a chat about those conifers. Have you selected your evergreens?

GARDENER.—Havn't found time to write out a list, but have got one in my head. You are prepared to read off one, I see, by the paper in your hand. Please sit down, and proceed now.

NEIGHBOR.—I will do so, if you promise to give me your notes and comments, as I go on. I have given my trees in the order of merit, and have added some reasons for my preferences.

I. *Norway Spruce.* (*Abies excelsa.*)—Placed first on the list, because of its great general excellence. Not so neat, feathery, and graceful as the hemlock, yet easier transplanted, and more rapid in growth. Not so grand and flowing as the white pine, yet more symmetrical, bears removal better, and is more suited to the moderate extent of ordinary pleasure-grounds. It is hardy, more hardy, most hardy. Take it all in all, it is *the* tree for the people. So I think.

GARDENER.—The multitudes raised from seed, and sold every year in all parts of the country, prove its popularity. It makes a strong, coarse hedge, and a good wind barrier for a garden, if it be trimmed a little every year to thicken it.

II. *Hemlock Spruce.* (*Abies Canadensis.*)—Put second, only because it is somewhat hard to transplant, except when quite small. As to its intrinsic beauty, there can be no question; it ranks first among evergreens, native or foreign. Hardy, of course, since it grows wild on the hills in the cold regions of Maine and Canada.

GARDENER.—Right, again. Queen of conifers, is this home-born beauty. I like it none the less for its shyness in transplanting. It is too good a tree to be had without any painstaking. Right glad am I that it won't grow if set out like a fence-post. You didn't mention what a neat emerald hedge it makes. Begin with plants a foot high, cut them back well for several years, and the hedge or screen will become as impervious almost as the box-tree.

III. *The Pines.*—And first, the Weymouth Pine, (*Pinus strobus.*) An excellent tree for parks or large ornamental grounds—it may, also, stand near the margin of small yards. The pine foliage is heavier, more plume-like and silky than the spruce. The soft, silvery tinge of the white pine is one of its attractions.—The Bhotan Pine, (*Pinus Excelsa.*) resembles the Weymouth somewhat; but in many quarters it is rather sickly, and can not be highly commended.

The Austrian, (*Pinus Austriaca,*) is a noble tree, with dark, sea-green foliage, holds its color fresh and vivid through the entire Winter, is hardy as the hardiest, and is to be recommended.

The Oregon Pine, (*Pinus ponderosa,*) resembles the last, but is built on a larger pattern. It throws out its ponderous arms on every side, grandly, almost defiantly. In its very long leaves, it resembles some of those California pines which can not be successfully grown at the far north.

The Scotch pine, (*Pinus sylvestris,*) is worth a place in every collection of this family. It seems to be less pyramidal than most of the pines, and inclines rather to an irregular pear-form, with the stem down. As it becomes large, it strikes out into very picturesque shapes.

GARDENER.—You have left out the Corsican pine; but not unwisely, for it proves slightly tender at the far north. The *Cembrian* pine ought to be in every list, however small. It grows slowly, but is very dense in habit, has a fine, glossy green color, and perfectly hardy. There are others, but you have included the best.

IV. The *Silver Firs*, (*Picea.*)—South of 42°, the European Fir, (*Picea rectinata,*) is generally hardy, and very desirable. It has a striking statuesque symmetry. The Siberian, (*Picea picbta,*) has nearly or quite all the excellences of the foregoing, and is hardy further north. Fraser's Silver Fir seems to be a variety of the common Balsam Fir, which most surely will be planted widely.

V. The *Arbor Vitæ.*—The Siberian is confessedly the best member of this family. As hardy as the native, denser than that, of a darker and richer tint, and holds its color better in Winter. The common American *Arbor Vitæ* is one of the most serviceable of known trees. By a little pains in choosing specimens, one can get trees handsome enough for the finest lawn. Then, for screens and hedges, nothing is better. It will grow anywhere, anybody can transplant it, and it can be sheared into any shape. The *Siberian Arbor Vitæ* grows very compact, a beautiful cone, and is every way adapted for single specimens, or to be set in rows as a screen.

VI. *The Junipers.*—Of these there are many varieties. The Swedish is perhaps the best, for a wide range of latitude. The Irish is neater in style of foliage, but slightly tender at the north. The American is hardy, but coarser.

GARDENER.—I wonder the Junipers are not more generally planted. They are particularly well suited to small grounds and to cemetery lots. Their spiry, conical shapes throw them out in strong relief among other trees. But you have forgotten the American Black and White Spruce, and the Red Cedar.

VII. NEIGHBOR.—I intended to speak of them, and of several of the newer conifers which promise well. There is the *Thuiopsis borealis*, which is hardy through Central New-York, and very beautiful. Then, there is *Pinus Lambertiana*, and *Pinus Beardsleyii* and *Picea amabilis*, and *Picea Nordmaniana*, and others which will ere long find a place among standard trees.

GARDENER.—A good list, sir, for an amateur to make out. The latter part of this month is the best time to plant. Good morning; our May-day talk has been pleasant and profitable.

The Flower Garden.

In this merry month of May, the flower garden should *begin* to look attractive. The walks will, of course, be cleaned and the edgings clipped. The double Hyacinths, which have quite heavy flower stems, may break down in stormy weather, if not protected in some way. Wide shingles, set up on the exposed sides, will break off the wind somewhat. But they do not look well. A better way is to provide a bundle of slender, smooth stakes, about eight inches long, and to tie every flower stalk to one of these. Keep the ground loose and work it smooth between all the plants, including Narcissus, Tulips, etc. While the gay show lasts, make the most of it: it is, all things considered, one of the finest in the year, and will not come again under twelve months. As soon as the leaves turn yellow (not before,) cut them off close to the ground. Or, if you are very neat, and can not bear the first sign of slovenliness, as soon as *the tips* of the leaves become yellow, you may lift the bulbs with a narrow spade or a trowel, and set them ont temporarily in a retired corner. Then smooth down the borders, and prepare to set summer bedding-plants, or to sow annnals.

But does some lady lament that she has as yet no flower-garden? She has the ground, and seeds, and a few plants. But she wants a little instruction in laying out the borders, and in arranging plants in them. We snbjoin a few hints; but make haste, Miss Flora, or the season will get ahead of you. Several months ago, we gave a sketch of a plan worked out in onr own grounds, which looks well, and is easily managed. But for those who would like something different, we give another, (fig. 1), a favorite with Mr. Downing, and taken from one of his books. In such symmetrical gardens, it is not desirable to use coarse and tall flowers in any of the beds, as they would hide the others and destroy the general effect. Choose rather the dwarfish plants. For this particular pattern, it would be a good plan to set verbenas in the four outer beds: say, white verbenas in one, pink in the next, purple in the next, and scarlet in the last. In the small, central bed, put a sun-dial, or vase, or classic figure of any kind. An ornamental frame of some sort, with a delicate climber festooned about it, would look well. And perhaps a single row of verbenas or petunias might encircle this central ornament. The twelve other beds may be managed thns: every alternate bed devote to bulbs, set at a reasonable distance apart, so that as soon as the tops of the bulbs begin to wither, showy annuals may be set between them. They will completely cover the bed by mid-summer. Some of the best annnals for this purpose, are: Drummond's Phlox, Portulacca, Sweet Alyssum, Eschscholtzia, Collinsia bicolor, etc. The other six beds may be occupied with the various scarlet Geraniums, Heliotropes, Ageratum, Petunias, Pyrethrum and other bedding plants. These will keep the garden in a blaze of beauty all Summer. The walks of such a parterre should be made of the finest gravel, and always kept clean and smooth.

Fig. 1.

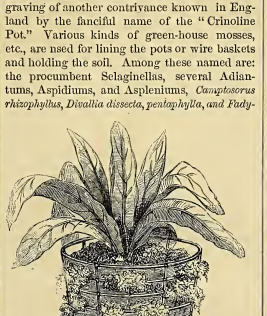
But some very sensible persons do not like perfect regularity and symmetry. They are picturesque in their tastes, and want their gardens to have a certain free and easy, rambling look. With an eye to the wants of snch people, we give the cnt fig. 2. This garden, it will be seen, is seclnded from the other parts of the

Fig. 2.

grounds, by low trees and shrnbs, irregnlarly grouped. It is entered by a covered walk, seen at *a*. The beds are cnt out in irregnlar patterns, yet so fitted to each other as to leave abont the same width of walk between them at all points. The walks may be of gravel laid over a solid bottom of cobblestones, or of smooth turf. If of the latter, the grass must be shorn and rolled once a week, and the verges neatly trimmed. The planting of the beds may be done in a picturesque manner—placing a plant here and there, without regard to size or character—some pains may be taken to assort colors, hights, etc. Quite a pleasing effect is produced by snch a garden.

Crinoline Flower Pots.

The Moss baskets, of which an account was recently given (page 20), are exciting, deservedly, so much interest that we present here an engraving of another contrivance known in England by the fanciful name of the "Crinoline Pot." Various kinds of green-house mosses, etc., are nsed for lining the pots or wire baskets and holding the soil. Among these named are: the procumbent Selaginellas, several Adiantums, Aspidiums, and Asplenimns, *Camptosorus rhizophyllus, Divallia dissecta, pentophylla, and Fadyensia proifera.* The plants that succeed best in these pots are heaths, ferns, all peat loving plants, and doubtless many others. Plants may be so placed as to protrude from any or all sides and even from the bottom, and, with the moss which clothes the soil, present a mass of beautiful verdnre, at times rendered still more attractive by bloom.



Transplanting Tomatoes, etc.

If tomatoes, cabbage-plants, and the like, are "pricked out" several times in the hot-bed or seed-bed, they will become more stocky, and will form a mass of roots which will make their final removal to the open grnnnd an easy matter, and ensure their making a speedy and rapid growth. (By "pricking ont" gardeners mean transplanting from a thick bed to give each plant more room to expand its tops and roots, and thns secure a more stocky habit. The roots of plants freqnently transplanted are likely to grow in a more compact mass, and endure this final removal better.) While still under the glasses, they should have as much air as possible by day time, to inure them to the atmosphere of out-doors. Jnst after a shower the ground is wet enough to refresh the roots, and the air is so moist that it does not exhaust the plants by rapid evaporation. But that good shower does not always come at jnst the desired time; the season is advancing, our plants are full grown, and ought to be in the garden; what shall we do? Do this: provide a number of old boxes, or a few dozen shingles, and have at hand a few pails of tepid water. Having stretched a line, make holes along side of it, where the plants are to stand, and pour a pint or more of water into each, leaving it to soak away. Take up your plants carefully with a garden trowel, preserving as much dirt as possible around the roots, and then set them in the holes, drawing fine soil aronnd them, and covering the stems a little higher than they stood before. Previous to finishing off, pour about half a pint of water into each hole, and then cover with common dry soil,—though this last watering is not essential. Shield each plant with a box or with shingles from the heat of the sun. The leaves may droop a little for a day or two, bnt they will revive again, and not a plant be lost. Following this method one can transplant these, and many other plants, whenever he pleases.

Poisonous Plants and Antidotes.

Poison Sumach, Poison Elder, Poison Dogwood, (*Rhus venenata.*) Poison Ivy, Poison Oak, (*Rhus toxicodendron,*) Climbing Ivy (*Rhus radicans*).

The poisonous aerid property of the milky juice of these shrubs is neutralized and made harmless by almost any alkali. When therefore one has been exposed to being "poisoned" by either of these plants, the parts exposed should be washed as soon as possible in a weak solution of potash, saleratus, soda or ammonia water, or even strong soapsuds. A piece of hard soap carried in the pocket to be used as occasion demanded might save a good deal of after torment. White lye forms a very simple and a very complete protection against the poison of Dogwood, or Ivy. It is made, as almost every body knows, by putting a couple of shovelfuls of hard wood ashes into a pail of water, stirring it up well and standing it aside to settle. Before going out to work among Dogwood or Ivy, wet the hands, arms, face, and legs, so far as may be necessary, with the lye and let it dry on the skin. You may now work among the vile stuff without harm. Take care not to make the lye strong enough to injure the skin, the same caution must be observed in the use of the alkalies named above. When the poisonous juice has been in contact with the skin for some time and specially after the inflammation has set in, it may be doubted whether its action can be controlled, the poison must run its course. Indeed if much of the surface of the body is affected, it will be very unsafe to attempt to drive it away. I once met with a case where the eruption left the skin and settled upon the lungs, throwing the patient into great danger of speedy death from congestion of that organ. Very active treatment re-

lieved him from the present danger, but it was months before he got rid of a troublesome and alarming cough which followed. The sufferer must keep cool—live on water gruel—call to his aid all his patience and bear his torment as he best can. A moderate dose or two of Epsom salts will serve to cool the blood and to keep the eruption from running into bad sores or ending in a crop of boils.

K.

The writer adds in a note to the Editor: "I have suffered severely often—and once dangerously from the plants named above, and know from trial and experiment the neutralizers of the poison."

Vinegar—Acetous Fermentation.

The sharpness of vinegar is due to acetic acid which it contains. Its color and flavor, aside from the sourness, are due to the other ingredients of the cider wine, or any thing else from which it is made. Acetic acid is only produced from alcohol, which, absorbing oxygen from the air, becomes acetic acid. Alcoholic liquids will rapidly turn to vinegar if exposed to the air, and themselves thoroughly exposed, the more rapidly will this, which is called the *acetous fermentation*, proceed. Warmth also greatly promotes it, and any fermenting body diffused through any liquid containing alcohol causes it to go on more rapidly. Good cider vinegar contains only about 5 per cent. of acetic acid; it is very strong when it contains 6 to 8 per cent, and the best wine vinegar contains only 10 per cent. This renders it necessary where vinegar is transported far, to carry 93 to 95 per cent. of water, and so, of course, it is much cheaper to carry the strong acid and make vinegar by adding it to water at the journey's end. "Distilled vinegar," or acetic acid lacks the pleasant flavor of good cider vinegar and has only the peculiar taste of the volatile pungent acid itself.

When cider is set for vinegar, place the barrels in a warm shed, or even in the open air, on the sunny side of the house, tack some gauze over the bung-holes, to keep insects out, and it will soon become vinegar. The addition of "mother of vinegar," which is a fungus plant (*Mycoderma aceti*), seems to give an impulse to the fermentation, and the same be given by a quart or two of good strong vinegar drawn from the bottom of the barrel; but if the cider has any proper strength, these additions are of no advantage, and if it is weak they are apt to produce moldiness.

For the American Agriculturist.

Hints on the Art of Butter Making.

In order to make pure butter, something is required besides the good breed of cows—the sweet grasses—the soft springs—the rolling lands—and the rich milk, and the most experienced churners—the most improved machinery—the purest atmosphere—the best material may be manufactured into yellow grease instead of butter, unless the process be properly performed. It is a fact well known to scientific dairymen, that the pure butter is *not made by agitating the milk—not made by the process of churning. Butter already exists in the milk*, and the art of separating it from the milk, is that on which the success of the dairy depends.

Butter exists in globules so small as to defy the detection of the eye unaided by the microscope, and the removal of these globules without crushing them, is the delicate and difficult task the dairyman has to do. There is no luxury that comes to the table which is so exquisitely sensitive as butter. If the cow feeds on white clover, the butter has a white clover flavor; if she feeds on cabbages, the butter has the flavor of cabbage; if the butter is kept in the vicinity of the stable, it forthwith becomes tainted with the smell of the stable; if packed away in pine tubs, it catches the taste and odor of the pine. It requires skillful handling or it will certainly be spoiled. If there is too much rubbing in the churn, these fine globules, mashed and crushed against the sides of the churn, will give greasy butter; and if the air is excluded the gases will injure it. What can be done, you inquire, to cause the adhesion of the globules without grinding or breaking them. Experienced churners answer the question, when they caution young beginners not to churn too fast, not to heat the milk too much, not to overdo, etc. They may not in every instance understand the philosophy of the fact, but they do know the fact, that "overdoing" makes grease and not butter. The seasoning of butter is a matter of taste, and there are a great many persons who imagine that the more salt they put in the butter the better it keeps. That is a great mistake. Just enough and none too much is what is required. [Few indeed, even among butter makers in this country, know the luxury of *fresh* butter with no salt at all.—ED.] Too much will spoil the taste and not save the butter. Without penetrating any deeper at present into the philosophy of butter making, I will simply add that, a gentle and uniform agitation of the milk will best reward the butter maker for his pains. [The cream should have a temperature of about 65° F. when churning begius.—ED.] The butter should be kept away from all unpleasant odors, and when put down should be packed in white oak tubs.

Clean cows, clean stables, sweet churns and pans, neat and tidy operators, are among the things desired by those who would send pure butter to market.

GEO. W. BUNGAY.

Grease Spots.

A grease spot on many delicate fabrics is a difficult thing to remove, on others it comes away very easily. When first made, before the fibers have thoroughly absorbed the grease, soap of almost any kind will often quickly remove it; after a few days, a soap of peculiar quality is required. The hardest and whitest is commonly best, and softsoap is the most powerful, but thickens or changes the color or weaken the texture of the goods. Turpentine, kerosene, and other carbonaceous liquids, have a great affinity for grease, and dissolve it, but are themselves so difficult to remove from cloth that by their use we are apt to only diffuse the grease over a larger surface. Ether, chloroform, and to a limited extent, alcohol, dissolves grease, and though they do not remove it any better than turpentine, yet they bring it into a condition to be easily washed away by soap and water. On fabrics not injured by alkalies, ammonia water used to wet the spots, renders them easy of removal. Ox gall is a soap of a very delicate, mild character. It will sometimes remove grease, and other spots from silks, and other delicate fabrics, without injury to the colors, when every thing else fails; it is itself easily washed off. Almost any very fine soft substance will absorb grease. The articles most in use and very effective are, potter's clay, French chalk, common chalk. These are scraped upon the spot in fine powder, or wet up to a paste and laid upon it, and then by application of a hot-iron in close proximity, the grease, even though it be wax or spermaceti, is absorbed by the clay and may be washed away, and all removed after a few patient applications. In the absence of clay or French chalk, or on fabrics likely to be injured by them, any bibulous paper (such as will quickly absorb water, like blotting paper) may be laid upon the spot, and a hot-iron being applied, a great part of the grease will be taken up by the paper, and the rest chiefly diffused so as not to be seen.

Cocoanut Shell Hanging Basket.

Miss E. M. Powell, of Ghent, writes to the *Agriculturist:* "A very pretty hanging basket can be made by sawing off about three inches from the smaller end of a cocoanut, removing the meat, and covering the ontside with the green, the cup, and the wood mosses. These may be fastened to the shell with a solution of gum arabic, made very thick. I have one containing moneywort (growing in the shell) which droops gracefully over the sides, and a verbena which is now (March 23,) in bloom. These cups or baskets are very easily and quickly made, and they are very beautiful."—[The shell is of course suspended upon a string which may be attached to the upper rim of the cup by means of small holes. Small vines or moss may be trained up the strings. See page 212, July *Agriculturist*, 1861. These ornaments cost little or nothing, and they add much to the cheerfulness of a room. They are as good as medicine in the room of an invalid.—ED.]

Stone Jugs vs. Tin Cans for Fruits.

W. B. B., of Southern Minuesota, writes to the *Agriculturist* thus: "Here at the West, tin cans cost at least 33 cents per gallou, and can be used but once, to which must be added cousiderable more if you live far from the tinman. The "self sealers" cost 45 cents a quart here! Stoue jugs cost only a "York Shilling" (12½ cents) per gallon, and will last for years. On three years' trial we find the jugs preserve fruit better than tin cans. We fill the jugs while standing on a hot stove; and while the contents are boiling hot, close them with a cork or nicely fitting plug of soft wood, covering with melted sealing wax or resin."

[REMARKS.—After using hundreds of tin cans, common and self sealing, we have discarded them entirely, and advise others to do so, ou account of the danger there always is of the corrosion of the tin and the productiou of poisouous salts. Well glazed stone ware, jars, bottles, or jugs, answer well. We prefer glass, however. The dark colored glass is cheap. We use wide uecked bottles, one and two quart sizes—mostly quarts—corking while hot, wiping clean and dry, and coverlug with cement made of one pound of resin with about oue ounce of tallow melted together. The bottles are then set necks dowuward in small tin patty pans, costing a penny apiece, or in old saucers if these be on hand, and cement enough is dipped in to completely euvelop the top of the bottle neck. This entirely shuts out access of air. If the bottles be filled with hot fruits, and be corked and sealed while still hot, the pressure is always *inward*, but the tin or saucer covers prevent the cork being forced in by the air. We merely heat the fruits *through* in a kettle, dip them into the jars, or glass bottles of any kind, and seal as above. The experience of two years proves this mode to be the cheapest *and best*. But more full particulars next month.]

About Unleavened Bread.

To the Editor of the American Agriculturist.

I believe it is generally admitted that yeast, cream of tartar, and saleratus do uot add any nutritive properties to bread. But it is also as generally believed that good bread can not be made without them. This I think is a mistake. Certainly some of the best bread I ever tasted was made as follows:

No. 1. Take wheat flour (either Graham, or flue,) and pure soft water, and make into a very *stiff* dough, roll out from half to three-fourths of an inch thick, cut into cakes two inches or less square, or round like crackers, prick them through several times with a fork (to prevent blistering), pass them into an oven sufficiently hot to bake wheat bread, and keep up the heat for twenty minutes or more.

No. 2. Mixtures of corn, rye, oats, and barley flour. If any one of these alone, on any two or three of them in almost any preparation, be mixed with pure soft water and baked as directed in No. 1, an excellent bread will be produced.

Bread made according to the above directions and thoroughly dried in the air after baking, or better, in a warm oven, will keep for many months, and lose none of its natural taste or good qualities, especially No. 1. Remember that nothing but water and flour, or meal, not even salt, is added in making unleavened bread; neither is the dough allowed to rise before baking. It rises while in the oven. This bread is not so soft and spongy as fermented bread, yet enough so for persons having good teeth. Those having poor masticators can soak it in water or milk, or in any way that they would use common crackers. If properly prepared, this bread does not loose its *sweet natural taste* by long keeping, nor can it sour, as is sometimes the case with raised

bread. Do not be discouraged if the first trial prove a failure, but try again. It is not uncommon even for experienced bakers to occasionally get a poor batch of raised bread. We made very many trials before we properly understood it. Now we are more sure of good bread every time we bake, than in the old way. E. W. KNIGHT.

Glenns Falls, N. Y., March 4.

REMARKS.—We give the above, not to endorse it especially, for the taste of people generally would require to be greatly changed, before they could be brought to substitute for light nicely raised bread, the hard unleavened water-mixed cakes. It can not be denied, however, that so far as health is concerned, the pure unbolted ground meal of wheat or other grain, is better adapted to the wants of the body than the fine bolted flour. But there is one consideration not taken into account by those who would discard yeast-raised bread. To enter into the blood as nutriment to the body, food must be digested, that is, its chemical structure must be changed, and a new arrangement of its elements be produced, which is equivalent to saying it partly decays in the stomach so that its elements, simple and proximate, may enter into other combinations. The fermentation (raising by yeast) is a step in this decay or destructive process, and it may well be queried whether fermented bread is not better adapted to digestion than unleavened bread. The yeasting, fermentation, or raising of the bread, is so much work done in advance for the digestive organs of the stomach. The baking merely stops the destructive fermentation at a particular point, to be resumed again when brought in contact with the gastric fluid. If this view be correct, sour bread—that fermented to excess—may be quite as healthful as the sweetest. It certainly goes through a souring, destructive process in the stomach, before it gets into the blood as nutritative chyle. So far as health is concerned, those people who habitually use sour bread, from want of skill, or from preference, do not appear to be less healthy, or to suffer more from indigestion than other classes. As for the taste in the matter, that depends mainly upon habit. The writer above has learned to like the hard unleavened cakes, and doubtless enjoys them. Another learns to like the sharp acid flavor of sour bread, and esteems your light sweet bread as insipid. The latter is the case generally with the people of Central Europe.—ED.]

Old Fashioned "Hulled Corn."

"Aunt Mary" of Colchester, writes to the *American Agriculturist*: "Some of the old fashioned ways of using corn, in vogue when wheat flour was almost as scarce and precious as gold dust, are worthy of being called to mind now, especially by those who do not relish corn bread or 'hoe-cake.' Here, for example, is my old and my present way of hulling corn, which furnishes a dish that would have pleased Mr. Smith, and perhaps have made him outgrow his suspenders in half the time mentioned in connection with his picture in the *March Agriculturist*.—Take about as much ripe dry corn as would be shelled from a dozen ears, and put it in an iron kettle, covering it with cold water. Tie in a cloth or small bag about two teacupfuls of good wood ashes; put the bag in with the corn, and boil until it looks yellow, and tastes pretty strongly of the alkali. Take out the bag, and boil the corn slowly in the lye for an hour or so; then pour off the lye and add cold water, and simmer until the corn swells. If the hulls do not then come off by stirring, turn off the water and rub the corn in a clean coarse towel, which will remove most of the hulls. Again add more water and simmer for several hours, stirring often to prevent burning. When it swells out large, becomes softened through, and looks white, add salt to the liking, and let the water cook nearly away. Eat warm or cold, with cream or milk. In cold weather it will be just as good when several days old."—[We agree with 'Aunt Mary' that this old fashioned hulled corn is a good dish. Rightly prepared, it is as soft and delicate as green corn in the ear, though it has not the sweetish taste. Unless plenty of water be added to thoroughly wash off the alkali after the hulls are loosened, it will not suit the taste of some persons. The salting is an important part also. Most persons leave it too fresh, though we have tasted it when spoiled with excess of salt. It is a little troublesome to prepare, but is cheap, and good enough to pay for the labor. We wish 'Aunt Mary' was our next door neighbor, so that we could often drop in for a dish of the old fashioned hulled corn, that in our boyhood we considered as one of the greatest luxuries, but which has seldom been met with in later years.]

Corn Bread Questions—Explanations.

Many inquiries are made for *particulars* concerning the various corn bread recipes published in the first three numbers of this volume. We can not answer them; the contributors mostly live at too great a distance to be personally consulted. We published the directions just as given, or with emendations in the words and style only—not in the prescriptions. A few write that they have followed the directions, and yet can not produce good bread or cake, and intimate that there must have been some mistake or deception. We take it that none of the contributors would give directions different from these by which the actual specimens sent were made. A great deal depends upon the skill of the operator in using any recipe. Two persons will often produce a very different article of food, though both try to follow precisely the same directions. Comparatively few housekeepers make every batch of bread from the same barrel equally good, though intending to pursue the same method in each baking.

Pot-Pies.

A good pot-pie is a good thing; heavy, half-cooked dough is poor eating, and hard to be digested, whether cooked in the form of bread loaves, biscuits, or in a kettle. A lady reader of the *American Agriculturist*, whose pot-pies we have proved and approved more than once, writes out the following directions: Make the dough just as for raised biscuits; an egg, beaten and mixed in with the butter or lard shortening, improves the lightness and quality, but is not necessary. When the meat is boiled nearly enough, cut the dough into small biscuit size, and lay the pieces not among the meat, but on a perforated tin placed in the pot just above the liquid; cover and cook them through by the steam. Stir a little flour into the meat liquor and boil it well; lay the cooked crust on the dish and pour over it the gravy and the meat.——(2) Mrs. Lucy Upson, of Pecatonica, Winnebago Co., Ill., contributes the following: "For the crust, use 1 pint of sweet milk, 1 teaspoonful of soda, 3 teaspoonfuls cream of tartar, butter the size of an egg, and flour enough to make dough as stiff as for tea-biscuit. Roll out and cut like biscuit and drop on the top of the chicken, cover and boil 20 minutes."

MEAT FOR POT-PIES.—Tender poultry is of course preferable, when to be obtained; but almost any kind of meat not too fat, answers well. Good veal, and lamb, are next to poultry, but beef, lean pork, or spare-rib, or any kind of lean meat is far from a poor substitute, if the crust be made light.

Salad Dressing.

It is a great art to make a good dressing for green salad—lettuce or endive. The art consists in mingling the various ingredients so that each will become disguised and in its turn disguise the others while the combination in no wise obscures the delicious flavor of the lettuce or cadives—but rather augments it and promotes its digestibility.... Take the yolks of two hard boiled eggs, crumble them with a silver fork or dessert spoon, add about half a teaspoonful of ground mustard and a teaspoonful of salt, and mix all well together. Then add in three portions a dessert spoonful of pure olive, walnut or poppy oil, and rub the whole to a uniform smoothness. The addition of twice the quantity of oil will improve the salad to the taste of many, and nothing is more healthful; a dash of cayenne pepper, or a few drops of pepper vinegar may also be added; finally add about a dessert spoonful of sharp vinegar, and if the dressing is not fluid enough, a little water or more vinegar, adding it gradually and rubbing thoroughly all the time. A little experience only is necessary, but it requires tact and patience. Most people abhor oil because they pour it over the green leaves instead of blending it in a dressing. Others douse on oil, catsup, mustard, pepper, salt—every spice or condiment they can lay hands upon—sugar it well besides, and then drown it in vinegar. Think of catsup on a crisp lettuce head—horrible!

*

Greasing a Griddle—The Best Way.

"Letty Ermin" of New-York, writes to the *Agriculturist* thus: The soapstone griddles require no greasing, but the "flap-jacks" are insipid. Too much fat is equally objectionable. The piece of fat pork commonly used becomes blackened and seared to bitterness—disagreeable to the eye, at least. The very best greaser is a linen swab, dipped into nicely tried drippings, or suet warmed, and rubbed quickly over the surface.—This same kind of "swab" of smaller size, is also the best thing for greasing bread pans, and for fitting into the corners and scallops of cake forms.

"Pot-au-feu" Recipe direct from France.

MONTARGIS, France, March 12th, 1862.

MR. EDITOR: Seeing in the January *Agriculturist* an inquiry for a recipe for the French "Pot-au-feu." I send one that is good, and at your disposal. Although so far away from our native land, we think we cannot do without your most excellent journal.

To 1 gallon of water, put 4 lbs. of beef, 3 tablespoonfuls of salt, and 1 of pepper; set it on the fire, and as the scum rises, skim it until clear. Then add 2 carrots, 2 turnips, 2 leeks, cut in pieces; 2 onions, in one of which stick 3 cloves; 1 burnt onion, or other coloring. Boil gently 5 or 6 hours. The broth, with good wheat bread, vermicell, or tapioca, is good enough for any table. The meat is to be served afterward with the vegetables. E. M. L.

Laurel Leaves, mentioned in a recipe for Pot-au-feu on page 86, are not leaves of "ground laurel," "high," nor "low laurel," nor of any other wild plant called laurel by our country folk, but the common European laurel, or bay laurel, *Laurus nobilis*. It is cultivated sometimes in this country, and we are familiar with the leaves, which are often used in packing fig drums.

Breakfast Cake.

Mrs. Bennett, Ripley Co., Ind., recommends: "2¼ cups flour, 3 well beaten eggs, 1 teaspoonful salt, and sweet milk enough to make a stiff batter. Add the eggs last. Put in a hot, greased pan, and bake until brown."

Cheap Cup Cake.

Contributed to the *Agriculturist* by some one whose name is not on the recipe. "Take 3 cups of flour, 2 cups of sugar, 1 cup of butter, 4 eggs, ½ cup of sweet milk, ½ teaspoonful of soda, and 1 teaspoonful of cream of tartar; flavor to the taste."

Corn Meal Pudding.

By same as above: Take 1 quart of mush, and cool it with new sweet milk (not quite as much milk as mush), 5 eggs, ½ teacupful of sugar, 1 teacupful of flour, a little salt and soda or quick yeast, and ground cinnamon if liked. Bake 1 hour in a moderately slow oven, and eat with sauce. Some prefer to use no sugar in the pudding itself, but to eat with butter, sugar and nutmeg mixed.

Indian Meal Pies. Contributed to the *Agriculturist*, by Mary Williams, Linn Co., Iowa: Stir a small teacupful of very *fine* ground Indian meal into 2 quarts of boiling milk. When nearly cool, add 5 beaten eggs, and sweeten to taste, like a custard, adding spice and orange peel, if desired. Bake with a crust, the same as custard pies.

A DISTURBED NAP—FROM A PAINTING BY J. L. HAMON.
Engraved for the American Agriculturist.

The Editor with his Young Readers.

The above picture is not presented to our young readers as an example for them to follow, but simply as a sketch of real life. Tired of his toys, the active little fellow is wide awake for some excitement. How quietly he slipped his shoes off and moved about the room, and by taking thought, and a foot stool, succeeded, after a fashion, in adding a cubit or less to his stature, and thus the mischievous elf found at last an outlet for his pent up fun. He has weighed well the half-in-jest scolding he will get and come to the conclusion that the fun is worth all it will cost. Well, we sympathize with the little fellow, and though confessing it is not the pleasantest thing in the world to be waked up out of a pleasant nap in such a way, would forgive the child more easily than some naughty blue-bottle fly that might do very much the same thing. *Genuine* fun, even that which might be called mischief, *if free* from any willingness to really trouble others, shows the working of a bright active mind. The element of fun in the disposition is an admirable trait, and we would by all means treat indulgently errors having their source in good natured frolics. True, the respect due to age and to parents is not always a sufficient check, and sufficient regard is not had for the times and seasons when a frolic is most desirable; but such familiarity is far better than the shrinking awe with which many children regard grown people. Children should enjoy their parents' society more than any other; and he who can appreciate the fun and frolic of his child, lives his own life over again. The warm, pleasant Spring days are here, and the children are now no longer housed with their rocking horses, dolls, and wooden warriors, but are abroad, with nimble feet climbing the banks and walls in search of flowers and health, discovering beetles, bugs, and birds' nests, and leaving us to discover the tears in their clothes, and the many black and blue spots from unremembered blows and buffets, received in their tussles with the bushes and the rocks. It is all good for them, and a hard knock now and then will do little harm, while mamma's afternoon nap will be far less frequently disturbed.

Letter from a "Pretty Old Boy."

MR. EDITOR:—I suppose you are much younger than I am, so far as years are concerned, for I judge that you are in the prime of life as they once called me; while I have got far beyond that. The old adage is: "Once a man and twice a child;" but I have been three times a child—once when from five to twenty; once when from fifty-five to sixty I began to play with my grand-children, and now at eighty two I am playing with my great-grand-children. I feel very much like a child, and good times I do have with my loving great-grand-children up here in New-Hampshire, for they love me, and I love them, and we play and talk a great deal together, and they read to me all in the boys and girls' department of the *Agriculturist*, and I tell them all about my long journey through life thus far, and try to teach them many useful things, too. You are younger than I, yet you can teach me a great deal along with your *other* boys. When I was first a boy, and then a young man, there were not any papers for the young people, and there were few schools, and fewer books, and so I could not learn much. Well, what I am trying to get at, is this. The other day I was telling our young group something about what you call "chemistry," that is, about the wonderful way the Creator has put things together—the stones, the soils, the plants, the water, the air, and even our bodies. But I got bewildered myself, and now I want to ask you to tell us boys, and the girls too, something about chemistry. We could read about it in books, but we prefer to have you to talk it to us in your plain, easy way. You will thus oblige some grown up people, and the young boys and girls, and especially—

A PRETTY OLD BOY.

What think you of that, young friends?—one who has seen *eighty two* Summers and Winters, eighty two Springs and Autumns, and yet considers himself a boy, and is desirous to still learn something of the wonderful works of God as displayed in the curious mechanism or composition of the things around us. Pretty soon, though for the sake of that group he gathers around him we hope it will be many years hence, yet pretty soon he will be transferred to a state where he will know far more of God's works than the wisest of us can conceive of here. When we think of his long experience and what he has seen and learned of the ways of men, we would gladly sit at his feet and gather lessons of wisdom such as only age can teach. Still we will adopt his suggestion, and in the best way we can try to tell you

Something about Chemistry.

First, let us collect a few things as examples. Here is an iron nail; here is a leaden bullet; here is a slip of zinc; and here, each by itself, is a bit of copper, some quicksilver in a vial, and a lump of charcoal. Let us begin with the iron. We hammer it, cut it, heat it, file it into the smallest dust, and it is only iron. Each finest particle is still a perfect piece of iron. We can make nothing of it but iron, *unless we add something to it.* Nobody has yet been able to make anything of iron but iron, without adding something else. We say, then, that it is a *simple body—an elementary body*—it has but one element or one kind of particles or atoms in it, and these atoms are all iron and only iron. If we take the lead, the zinc, the quicksilver (mercury), and the charcoal, and treat them in the same way, the result will be the same. In one we can only find lead, and nothing else; in the next only zinc atoms; in the next only copper atoms; in the next only quicksilver atoms, and in the charcoal (carbon) only atoms of charcoal. These then we call simple bodies or *elements*—things that can not be separated into two or more other things. It may surprise you to learn, that there are only about sixty of these simple or elementary bodies in all the world!—Now take a little piece of dry wood, a match will do, light the end and let it burn under a cold glass tumbler turned over it. See! The wood turns black and soon we have only a bit of charcoal left. But on the inside of the tumbler we have a moist dew (water) collected. The fact is, what was formerly wood has now been changed into charcoal and water, with besides a little of another substance that has escaped in the air unseen. Just as the water would have gone off had it not been caught and condensed by the glass. Our wood then is a *compound* substance, made up of at least two other substances, charcoal and water, both of which are unlike wood: wood then is *not* a simple, elementary substance. The chemist can go further; he can take the water and separate it into two other substances neither of which is at all like water; out he can not do the same with the charcoal, for that is one of the simple elements out of which other things are made.—Almost all the things we see about us are compound bodies, made up of two or three, or more, other substances, just as cake is made up of flour, milk sugar, butter, eggs, salt, etc., though any body who did not know how it was made would never dream that there were so many things in a bit of cake. *Chemistry* tells us some very curious things about the simple or elementary substances, and the way the elements are put together to make different *compound* substances. It tells us how compound bodies can be taken to pieces, and their elements be put together to make other very different compounds. It tells us how only fifteen or twenty simple or elementary substances are curiously put together to produce nearly all the things we daily see around us. It teaches us many lessons very useful in our every day life. We shall find that we are really practising chemistry con-

Shadows on the Wall.

stantly, and that our comfort depends much upon chemical operations, and that by just so much as we learn to practice chemistry, by so much will we promote our comfort. Chemistry is intensely interesting, as well as useful. The world looks a very different world to one who has learned to look into the way its thousands of objects are made up. It is not a difficult study when rightly taken hold of. There are a few letters of the chemical alphabet to be learned before you can read the science, and practice it. Until our next lesson, please remember the first two letters, viz.: *A. A* simple body, called an *element*, one which can not be separated into two other substances. *B.* A compound body is one which can be divided into two or more different substances.

SCENE OF THE BATTLE GROUND OF PITTSBURG, OR SHILOH, TENN, APRIL 6th and 7th, 1862.

We again throw over some pictures, puzzles, and stories, to make room for Maps of localities of intense interest and importance at the present time. (See pages 156 and 157). Study them well. We hope soon to have no more special occasion for these now very useful maps.

Last month (p. 129) we gave two sh[illegible]r Pictures to be ma[illegible] the hands, and hay, other[illegible]prepared of the same kind; but we lay them [illegible] to ap[illegible]r time, to make [illegible] for a very fine card-board picture, the original of which was sent to the *Agriculturist* by Mr. J. Fill, Principal of Bladensburg Academy, Md. Mr. F. will see that we have improved somewhat upon his pattern.—This is easily used, and we make it of the full size for marking out. Lay over this picture a thin piece of paper, and with a pencil trace the outlines, rounding the eyes, etc. With the pattern thus obtained, mark out the picture upon a thick piece of card-board, or pasteboard, or any paper thick enough to let no light pass through it; the cover of a ribbon or other box will be just the thing. It will improve your taste to transfer the picture by the eye. Cut the holes squarely through the card-board with a sharp pointed knife. For light shading on the hair and chin or beard, make slits very narrow. You will improve your skill in studying light and shade, by puncturing the card with pin-holes on the forehead, beard, the side locks, etc. Hold the card-board squarely between a single strong light and a white wall, and the shadow will be very pretty. Vary the relative distance between the light, the card, and the wall, to produce the clearest picture. Different kinds of light will somewhat vary the appearance of the shadows.

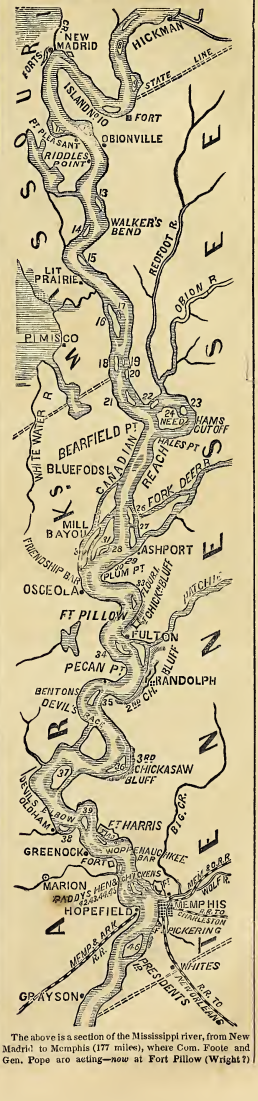
The Mississippi River—Distances.

As we now write, many eyes and hearts are turned towards the Mississippi River and Valley. Few of our younger readers have any idea of the real magnitude of this great stream, which receives the water from about seven hundred million acres. We have had the pleasure of going both up and down on the Mississippi, from St. Paul, Min., to New-Orleans, and we confess that all we had read in our geographies, and elsewhere, gave but a faint idea of its vastness. Think of a lake *from one to two miles wide*, often more, and a thousand miles long, and you have some idea of the Mississippi between Cairo and New-Orleans. The river is exceedingly crooked, now running this way and now that; sometimes you are going down stream, though sailing directly north. In a few places the channel bends round so that, after running 10 to 30 miles, it comes back to within two or three miles of itself. So crooked is the course of the river that, though it is only about 475 miles in a direct line from Cairo to New-Orleans, yet the distance by the river is 1046 miles. There are many islands in the river. For convenience these are numbered, beginning with No. 1 for the first island below Cairo at the mouth of the Ohio river, and so on down to the Island No. 10, and to Island No. 150, near New-Orleans. But we have only room now for the following table of distances, which will be useful while we are watching the course of the armies. The following distances in miles are by the river channel:

	From Place	From Cairo	From New Orleans.
St. Paul		695	2035
Red Wing	37	949	1780
La Crosse	149	800	1840
Prairie du Chien	90	704	1744
Dubuque	80	624	1664
Rock Island	109	515	1555
Davenport			
Muscatine	40	480	1320
Burlington	60	420	1460
Quincy	98	351	1071
Alton	130	195	1235
Missouri R.	8	199	1222
St. Louis	17	178	1215
Carondolet	7	169	1208
St. Genevieve	57	111	1151
Cape Girardeau	71	40	1080
Cairo	40		1040
Columbus	16	16	1024
Hickman	18	31	1006
Island No. 10	25	56	984
New Madrid	9	65	975
Osceola	87	152	888
Ft. Pillow about	15	167	873
Memphis	80	247	793
Randolph	8	175	866
Memphis	67	242	798
Peyton	35	309	740
Helena	23	353	715
Yazoo Pass	11	356	704
Concordia	24	380	641
White River	3	402	638
Arkansas R	18	420	620
Napoleon		420	620
Columbia	65	485	555
Princeton	45	530	510
L. Providence	20	550	491
Vicksburg	73	623	408
Grand Gulf	57	680	352
Natchez	52	736	301
Fort Adams	54	793	247
Red River	13	806	234
Bayou Sara	68	869	171
Baton Rouge	33	902	138
Plaquemine	23	925	115
Donaldsonville	35	960	80
New-Orleans	80	1040	
Mouth of Miss'r.	100	1140	100

THE MISSISSIPPI,

FROM NEW-MADRID TO MEMPHIS.



The above is a section of the Mississippi river, from New Madrid to Memphis (177 miles), where Com. Foote and Gen. Pope are acting—*now* at Fort Pillow (Wright?)

Market Review, Prices, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Monday Morning, April 21, 1862.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
26 days *this* m'th	248,650	107,370	263,900	49,650	116,000	143,000
24 days *last* m'th	304,000	163,000	269,000	119,000	164,000	171,000

SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.
26 days *this* month	305,800	389,000	1,367,000	138,000	235,000
24 days *last* month,	311,000	279,000	1,061,000	143,950	265,000

2. COMPARISON WITH SAME DATE LAST YEAR.

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
26 days 1862	248,650	107,370	263,900	49,650	116,000	143,000
26 days 1861	236,500	331,500	385,000	6,800	128,000	146,000

SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.
26 days 1862	305,800	389,000	1,367,000	138,000	235,000
26 days 1861	467,000	2,479,000	1,660,000	39,000	96,000

3. *Exports from New-York, from Jan. 1 to April 16.*

	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
1862	806,575	2,360,557	4,170,100	488,974	30	15,447
1861	607,646	3,483,363	2,419,500	5,127	1,000	24,535

CURRENT WHOLESALE PRICES.

	Mar. 19.	April 21.
FLOUR—Super to Extra State	$5 20 @ 5 70	$4 55 @ 5 10
Superfine Western	5 20 @ 5 35	4 50 @ 4 70
Extra Western	5 45 @ 6 80	4 80 @ 6 40
Fancy to Extra Genesee	5 90 @ 6 80	5 15 @ 6 40
Super. to Extra Southern	5 70 @ 7 50	4 80 @ 7 00
RYE FLOUR—Fine and Super.	3 00 @ 4 25	3 10 @ 4 25
CORN MEAL	2 90 @ 3 25	2 80 @ 3 15
WHEAT—Canada White	1 40 @ 1 50	1 35 @ 1 40
Western White	1 40 @ 1 55	1 35 @ 1 45
All kinds of Red	1 26 @ 1 45	1 10 @ 1 35
CORN—Yellow	58 @ 60	57 @ 58
White	60 @ 68	60 @ 70
Mixed	58 @ 60	58 @ 59½
OATS—Western	38 @ 39	38 @ 39
State	39 @ 40	49 @ 40
RYE	80 @ 83	79 @ 82
BARLEY	80 @ 1 00	70 @ 1 00
HAY, in bales, per 100 lbs	75 @ 90	55 @ 70
COTTON—Middlings, per lb	26½@ 27½	29½@ 30
RICE, per 100 lbs	6 50 @ 7 50	6 00 @ 7 25
HOPS, crop of 1861, per lb	12 @ 20	12 @ 18
FEATHERS, Live Geese, p. lb.	34 @ 38	34 @ 38
SEED—Clover, per lb	7¼@ 7⅝	7¾@ 8½
Timothy, per bushel	2 12½@ 2 37½	1 75 @ 2 00
SUGAR—Brown, per lb	6 @ 8½	6 @ 8½
MOLASSES, New-Orleans, p.gl.	40 @ 45	40 @ 45
COFFEE, Rio, per lb	19½@ 22	18 @ 21½
TOBACCO—Kentucky,&c,p.lb.	8 @ 20	7½@ 18
Seed Leaf, per lb	7 @ 25	7 @ 25
WOOL—Domestic fleece, p. lb.	38 @ 52	38 @ 53
Domestic, pulled, per lb	32 @ 45	32 @ 45
TALLOW, per lb	8¾@	8⅝@ 8⅞
OIL CAKE, per tun	36 00 @39 00	34 00 @37 50
PORK—Mess, per bbl	13 75 @	12 25 @12 50
Prime, per bbl	10 75 @10 87	10 00 @10 25
BEEF—Plain mess	12 00 @13 00	12 00 @12 37½
LARD, in bbls., per lb	7½@ 8¼	7½@ 8¼
BUTTER—Western, per lb	10 @ 15	9 @ 14
State, per lb	16 @ 21	16 @ 20
CHEESE	6 @ 8½	6¼@ 9
Broom Corn—per lb	4 @ 6	4 @ 6
EGGS—Fresh, per dozen	15 @ 16	12 @ 13
POULTRY—Fowls, per lb	9 @ 10½	12 @ 14
Ducks, per lb	9 @ 14	16 @ 17
Turkeys, per lb	9 @ 14	10 @ 15
Dried Apples, per lb	6½@ 7	6 @ 6½
Dried Peaches, per lb., peeled	18 @ 20	18 @ 20
Dried Raspberries, per lb	13 @ 14	13 @ 14
POTATOES—Mercers, p. bbl	2 00 @ 2 25	2 50 @ 2 62
Peachblows, per bbl	1 88 @ 2 00	2 00 @ 2 12
Nova Scotias—per bush	62 @ 65	55 @ 60
Sweet Delaware, per bbl	3 50 @	3 00 @ 3 50
ONIONS—Red, per bbl	2 00 @	1 62 @ 1 75
White, per bbl	2 25 @ 3 00	2 00 @ 2 50
TURNIPS—Rutabaga, per bbl.	1 00 @	1 00 @
APPLES—Common, per bbl	3 00 @	@ 3 00
Apples—good, per bbl	3 75 @ 4 50	3 50 @ 4 00

The course of the Breadstuff Markets, during a few weeks past has, utterly set at naught the calculations of the best informed statisticians and dealers. With the *known* large deficiency in Europe, to be made up before harvest, prices have continued to decline, almost daily. The only explanations to be given, are: 1st. The great falling off in our importations of European manufactures, (over $100,000,000 in a year past) has reduced the means of foreign operatives so much, that they are now consuming vastly less of wheat, and flour, and eating more of cheaper, coarser food. Since Jan. 1st, they have taken **4,170,100** bushels of our *Corn*, against only **2,419,500** bushels during the same period last year. —2d. The heavy dealers, here and abroad, in expectation of a large advance, purchased more stock than they could easily carry, and a slight decline seriously embarrassed some of them, and forced them to sell. This disturbed the trade, and compelled other holders to realize, and the market has thus been greatly depressed and unsettled.—3d. The excellent weather abroad has led to the putting in of large crops of Spring wheat, which has acted somewhat upon the fears of dealers, though this new sowing can not come in to meet any immediate demand.—4th. The farmers of Great Britain, and in Europe generally, have improved the favorable weather of the Winter, to thresh and market most of their grain—a much greater proportion than usual. This, while supplying the immediate wants, will leave much less for the demand during the next three or four months. But every indication is, that there will, on the opening of inland navigation, be a new impulse to the Breadstuff trade, and a material and immediate advance from present low rates. Indeed, the upward movement appears to have already begun, there being a rise of 5 to 15 cents per barrel in flour, within two days......Cotton was dull and heavy early in the month, but has been in good request during the past week, and closes buoyantly, at 28c.@29c. ℔ lb. for Middlings . .. A very brisk export trade was transacted in Provisions until within a few days; recent unfavorable advices have checked the foreign demand, the market closes heavily for hog products, though steadily for other articles ... Hay, Hemp, Hops, Rice, Seed (except Clover) and Tobacco have been in limited request at irregular prices. Clover Seed was dull of sale, at low figures, a few weeks ago, but recently the demand has been unexpectedly large, while the receipts have been small, and the temporary scarcity rapidly carried prices up fully $1 per bushel (60 lbs.). The market is apparently more quiet just now, and rates are a little below the highest point recently obtained.. .The private sales of Wool were very moderate at former figures. An important auction sale occurred in Boston, on April 10th, when about 600,000 lbs. of fine Ohio and Pennsylvania fleece Wool were sold. The attendance was large, all the leading manufacturers in New-England having been represented and the entire lot was rapidly disposed of, at, on the whole, satisfactory prices. Large lots of extra and double Ohio and Pennsylvania sold for 44c.@46c.; extra Ohio sold at 43c., and a lot, very light, at 46c; double extra Ohio, very light, for 46c.@48c.; Ohio picklock, 49c.@50c.; a small lot choice Pennsylvania picklock, 51c. Washington County fleece, 44½c.@46c., and one double extra at 47½c. per lb.. . .The changes in the values of other Agricultural Products are shown in the table of Current Wholesale Prices.

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been freely supplied, the past month, the average receipts being 3,574 per week, which has about equalled the demand during the Lenten season. Prices this week are ½c. higher than our last quotations, or 9c.@9¼c. per lb., estimated dressed weight, for prime; 8c.@8½c. for fair to good; and 7c.@7½c. for poor, with an average of 8c@8¼c. for all sold. None left over at any market during the month.

Veal Calves.—Receipts for the past 4 weeks number 750 per week, which is a large increase from last month. At the last market day (April 15.) with 991 on sale, prices were very low, the best selling at 5c.@5½c. per lb., live weight, and fair veals at 4½c. Many poor ones sold at 3c. and under, not counting the week-old "bobs," which went in lots at 88c.@$1.25 per head.

Sheep and Lambs.—Receipts have only averaged 4,807 per week for the past month, which is less than any previous month for more than a year past. They are now scarce but with an abundance of veal, eggs and fish, prices are lower than last month, though they have ruled high until the last market day, when with over 6,000 on sale, the prices were equivalent to 3½c.@4c. per lb., live weight for clipped sheep, and 5c.@5½c. for unsheared sheep. A few lots of early spring lambs have been sold at $4½@$5 each.

Live Hogs.—Receipts are falling off, the average being 11,620 per week during the past month, which has been ample for the season. Prices have advanced ¼c. Prime, heavy, corn fed hogs are selling at 4½c.@4⅝c., live weight; poor light corn and heavy still fed hogs, 3¾c.@4⅛c. There is a surplus of thin hogs, which sell very slowly.

The Weather.—The Spring has been cold and backward; snow is hardly yet gone from the north sides of the barns and fences, and as far south as this, we had a heavy snow storm as late as April 9. Spring work has consequently been kept back much beyond the average time. The winter grains have not suffered however, and the fruit buds not having come forward to be killed by frost, a large yield of all kinds of fruit is now hoped for. We append notes crowded out last month. OUR DAILY NOTES, condensed, read: *February* 24, rain, high wind with snowfall on 27—*March* 1, 2, clear, fine—3, heavy rain, high wind, barometer 29°20'—4, 1 inch snow—5,6,7, 8,9, fine, mild—10, light rain—11, 12, clear and pleasant—13, light rain—14, heavy rain P.M.—15, rain and snow—16, clear—17, 18, 19, clear, fine—20, rain—21, rainy—22, 23, light snow—24, to 30, clear, fine, spring-like but chilly, with thunder storm on 30th—31, rain——*April* 1, fine, mild—2, light rain—3, 4, pleasant—5, rain—6, 7, pleasant—8, 1½ inch snow at night—9, heavy snow, 4 inches—10 to 16, mainly clear and growing spring like—17, 18, clear and very warm for the date, almost hot; the ground getting dry, and field work going on briskly.

Rain Fall.—The rain and melted snow from Feb. 15th, to March 15th, amounted to 5.27 inches. From March 15th, to April 15th, only 2.79 inches.——The following table prepared at Washington Hights near this city, by Mr. Morris, who keeps the register for the Smithsonian Institute, is quite interesting. It shows the quantity of rain, which has fallen during the past seven years.

Years.	Winter. inches.	Spring. inches.	Summer. inches.	Autumn. inches.	Total inches.
1854–5	12.12	10.09	13.89	11.88	47.98
1855-6	11.50	9.58	13.10	8;73	42.91
1856–7	11.13	18.09	15.46	7.23	51.91
1857-8	13.52	12.30	13.89	12.88	52.59
1858-9	16.23	14.88	13.48	11.57	56.16
1859-60	10.22	9.75	8.61	17.36	45.94
1860-61	11.31	17.43	11.65	15.58	55.97
Mean	12.29	13.16	12.87	12.18	50.50

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

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One whole column (145 lines), or more, $60 per column.

THE UNDERSIGNED, A YOUNG MAN, would like to spend the Summer upon a New-Jersey farm.
A. B. PALMER, Geneva, N. Y.

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Pure Italian Queens, of brilliant color, forwarded by express to any part of the U. S. Price $5 cash, to accompany the order.
No dark colored queens sent out from our Apiary.
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FROM THE ORIGINAL IMPORTED STOCK.
For sale by .... S. B. PARSONS, Flushing, N. Y

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PIANOS,
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Our large, elegent, and superior Pianos of 7 and 7¼ octaves at low prices for cash.

PIANOS FOR SMALL PARLORS,

6½ and 6 octaves, elegant and durable. All our Pianos have the INSULATED IRON RIM, giving strength and durability, and requiring less than half the usual amount of tuning.

ROSEWOOD YOUNG AMERICA PIANOS,
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SEND FOR DESCRIPTIVE CATALOGUES.
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[Any of the following books can be obtained at the office of the *Agriculturist* at the prices named, or they will be forwarded by mail, *post paid*, on receipt of the price. Other books not named in the list will be procured and sent to subscribers when desired, if the price be forwarded. All of these books may well be procured by any one making up a library. Those we esteem specially valuable, are marked with a *.]

American Bird Fancier	$0 25
American Weeds and Useful Plants*	1 50
American Farmer's Encyclopedia	4 00
Allen on the Culture of the Grape	1 00
Allen's (R. L.) American Farm Book*	1 00
Allen's Diseases of Domestic Animals	75
Allen's (L. F.) Rural Architecture	1 25
American Florist's Guide	75
Barry's Fruit Garden*	1 25
Bement's (C. N.) Rabbit Fancier	25
Bement's Poulterer's Companion *	1 25
Boussingault's (J. B.) Rural Economy	1 25
Bridgeman's Young Gardener's Assistant*	1 50
Bridgeman's Kitchen Garden Instructor	60
Bridgeman's Florist's Guide	60
Bridgeman's Fruit Cultivator's Manual	60
Brandt's Age of Horses*	50
Buist's American Flower Garden Directory	1 25
Buist's Family Kitchen Gardener*	75
Central Park Guide*	25
Chorlton's Grape-Grower's Guide*	60
Cole's (S. W.) American Fruit Book	50
Dadd's (Geo. H.) Modern Horse Doctor*	1 00
Dadd's (Geo. H.) American Cattle Doctor	1 00
Dana's Muck Manual for Farmers	1 00
Downing's Fruits and Fruit Trees of America**	1 75
Downing's Ladies Flower Garden	1 25
Eastwood on the Cranberry*	50
Every Lady her own Flower Gardener	50
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Fessenden's American Kitchen Gardener	25
Field's (Thomas W.) Pear Culture	1 00
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Linsley's (D. C.) Morgan Horses	1 00
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Quinby's Mysteries of Bee keeping*	1 00
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Stewart's (John) Stable Book	1 00
Thomas' (John J.) American Fruit Culturist	1 25
Thomas' (John J.) Farm Implements *	1 00
Todd's (S. E.) Young Farmer's Manual	1 25
Tucker's Register Rural Affairs	25
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Watson's Home Garden	1 50
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Youatt and Spooner on the Horse	1 25
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THE PRINCIPLES OF BREEDING; or Glimpses at the Physiological Laws involved in the Reproduction and Improvement of Domestic Animals. By S. L. Goodale, Secretary of the Maine Board of Agriculture. Boston: Crosby, Nichols, Lee & Co. 1861. pp 164. Price 75 cents. Indispensable to every stock grower who desires improvement in his animals—furnishing as it does a compendious statement of the principles by which alone successful practice can be guided. Sent by mail on receipt of the price.

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Several pairs about 2 months old.
One pair about 7 months.
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THE BEST SEED COVERER and PULVERIZER IN USE.

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Garden, Field, Fruit, and Tree Seed in every variety.

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Farm and Garden Implements and Tools.

SEEDS.—FIELD, GARDEN AND FLOWER SEEDS.

FERTILIZERS.—PURE PERUVIAN GUANO, BONE DUST, POUDRETTE, PHOSPHATE, PLASTER, &c.

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All of best quality and at low prices.

For sale by JOHN VANDERBILT,

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The best yet invented for planting in hills, simple, durable, and efficient. For particulars address the sole agents

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All kinds of Country Produce sold on Commission. Particular attention paid to the selection of Potatoes for Seed.

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SOLD ON COMMISSION,

Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c., &c.

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THE BEST MACHINE

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No Farmer intending to purchase a

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ALL THE GREAT FEATURES RETAINED.

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Four sizes—cheap—durable—light draft—free from clogging, and perfect in their operations either in cutting grain or grass.

Send for Circular giving full description and cuts of each machine.

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Ingersoll's Cheap Hand Power Presses for Baling

HAY STRAW, COTTON, WOOL, RAGS, MOSS, BROOM CORN, HAIR, HIDES, &c.

These Presses are made for any size or weight of bale required, and delivered on ship board in New-York. Farmers and others wanting such machines are invited to write for Catalogue containing full information.

PRICE OF MACHINES:

No. 1. Press for Hay, &c., weight of bale 150 to 200 lbs., $50.00
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Rags, Broom Corn, &c., ... 85.00

Weight of No. 1 Press, 800 lbs. No. 2, 1200 lbs.

Over 1000 of these machines are now in use, many of which are extensively used for baling Hay, etc., for the Army. Address INGERSOLL & DOUGHERTY,

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Rather Grinding.

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DEAR SIR:—I am pleased to say for your benefit, and all others who may wish to get one of the best *Iron Feed Mills in the country*, that I have run the Iron Champion Mill I bought of you over two years, without changing the plates, and the mill grinds well yet. I have ground corn and cob, sand-stone, opals, and white marble for plastering, and mixed feed and malt at the rate of forty bushels per hour, and it has given me very great satisfaction.

MARION, O., Jan. 8, 1862. J. K. HAMMERLE.

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Sedgebeer's Conical French Burr Mills, price $120.

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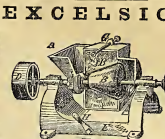

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HORSE POWERS.

These machines took TEN FIRST PREMIUMS at Western State Fairs last year, and are justly considered superior to all others. The grinding surfaces of the Mill are BURR STONE, of conical form, so adjusted, that the finest flour or meal, and the coarsest feed may be ground with the same MILL. Any person can operate and keep the mill in perfect grinding order without expense, and it

WILL LAST A LIFE TIME.

Driven by Horse Power our smallest Mill (No. 1) will grind from 8 to 15 bushels of feed the hour; if run by Water or Steam power, 13 to 20 bushels. Price of No. 1 MILL FOR FARM USE, $100. Nos. 2 and 3, MILLS for Millers' use, $140 and $170. The undersigned also make a Wire Bolt for No. 1 Mill, with which Farmers living at a distance from milling establishments are enabled to make their own flour. Price $50 extra.

SHANESVILLE, O., March 13, 1862.

GENTS.—The two mills I purchased are giving perfect satisfaction. I had an experienced miller to test the wheat-mill; the flour is as good, and bakes even better than that we get at the best custom mills.

The No. 1 Feed Mill does its work as well as any flat stone mill could do it, grinds as large a quantity in a given time, and does it with *less than one-half the power* required to run a flat stone mill. N. H. HOCHSTETLER.

GERMAN TOWNSHIP, O., March 13th, 1862.

This is to certify that I have been employed by D. M. N. H. Hochstetler to test the Conical Burr Stone Flouring Mill, bought of Bennet Bros., of New-York, and so far as I have tried it, it makes as good flour as any other mill.

DAVID LAUTENSCHLEGER, Miller

PHILADELPHIA, PA., July 11, 1861.

MESSRS. BENNET BROS.—The No. 2 Mill, driven by a five inch Belt is grinding 50 bushels of Corn per hour. It has proved itself to be what its name purports, "Excelsior."

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THE HORSE-POWER,

FOR DRIVING THRESHING MACHINES, FARM MILLS, HAY CUTTERS, COTTON GINS, CIRCULAR SAWS, MOULDING AND PLANING MACHINES, LATHES, ETC.,

Has proved itself to be the best ever invented. The friction is reduced by IRON BALLS, so arranged in all the bearings, that the whole weight of the castings runs upon them. THREE POUNDS DRAUGHT, at the end of a ten foot lever, will keep the power in motion! thus permitting the ENTIRE STRENGTH of the horses to be used on the machine to be driven. ONE HORSE will do as much work on this power, as TWO on the endless Chain Power. IT IS PORTABLE, and may be used IN THE FIELD as well as in the house. More than TWENTY FIVE PER CENT of horse flesh is saved OVER ANY OTHER POWER IN USE. It is simple in construction, and not liable to get out of order. THE $125 POWER WILL DRIVE ANY THRESHING MACHINE.

Price of Power for 1 to 4 horses.....$125
Price of Power for 4 to 6 horses..... 175

All Goods GUARANTEED, PACKED, and DELIVERED at depot or wharf at above prices.

GENTS.—With two horses on your Anti-friction Power, we drive your No. 1 Mill, grinding *15 bushels of corn per hour*, and cut a large quantity of hay at the same time. I have never seen a power that runs with so little friction, and consequently with so little strain upon the horses.

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CHATHAM, N. J., Jan. 15, 1862.

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EBN. F. CONDIT.

We have completed an arrangement with the Western Transportation Co., by which they agree to deliver our Mills and Powers at ports on Lake Erie at 25 cts. per 100 lbs. Milwaukee, Chicago, and intermediate ports at 20c.* Sheboygan and Green Bay at 35c., and to Two Rivers, Manitowoc, and Port Washington, Wis., at 40c. per 100 lbs.

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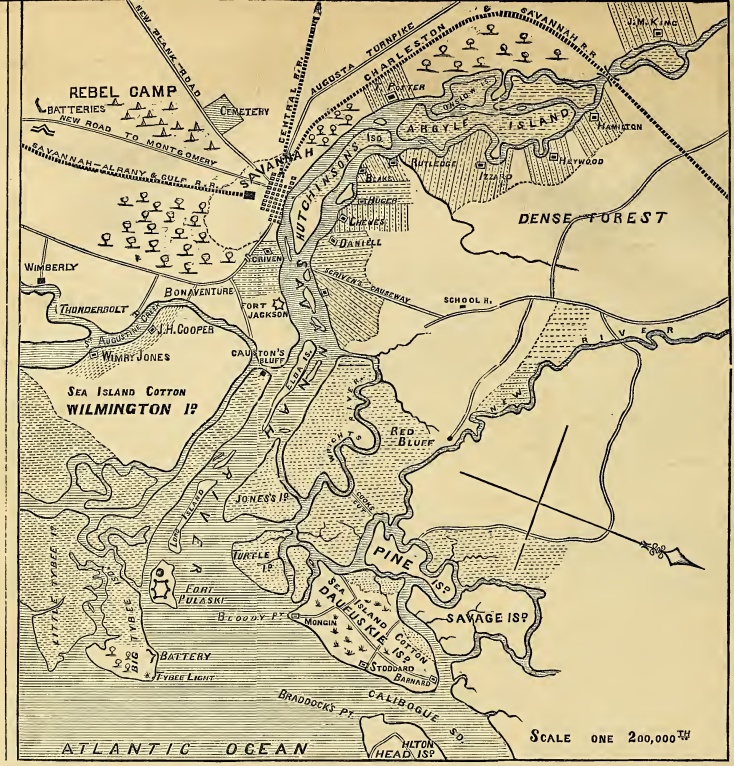
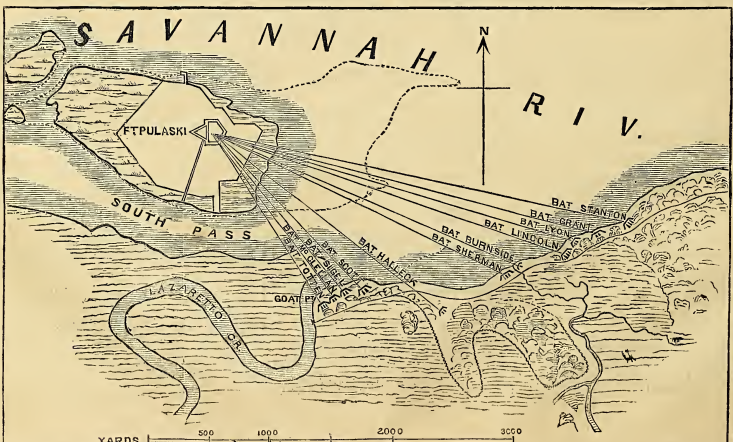
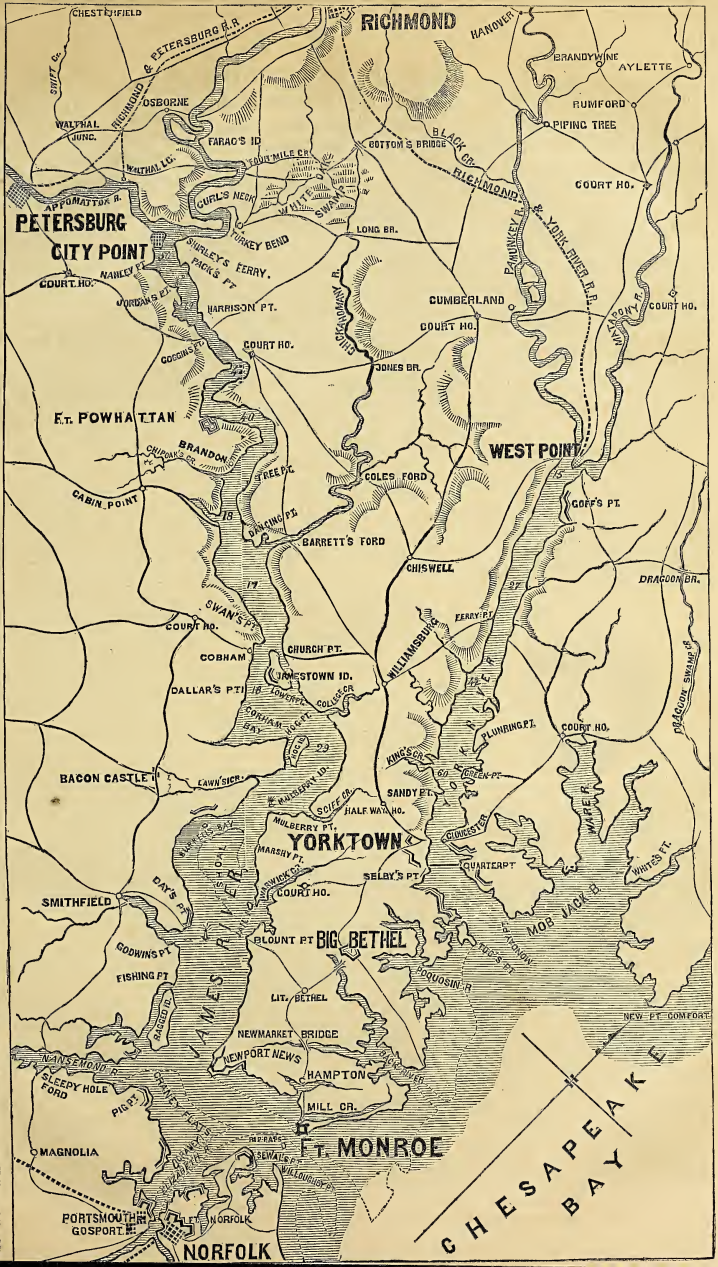




The two Maps on this page have a peculiar interest just now. The first shows **Savannah, Geo.**, and its surroundings, including Fort Pulaski which has just fallen. Without doubt the forces under General Hunter and Commodore Dupont are now moving towards Savannah.—The second map shows the plan of attack upon **Fort Pulaski**, which capitulated on *April* 11th. The 11 batteries represented, contained only 36 cannons and mortars, all told. The Fort mounted 47 cannons. This Fort is one of the strongest built in the country, and the fact that its walls were battered down by the recently improved cannons, fired at from one to two miles distance, will revolutionize the whole system of fortifications, throughout the world. The little "Monitor" and the "Merrimac" have destroyed faith in wooden ships. The results of this siege show that iron cased forts, as well as iron plated ships, will hereafter become necessary. We are indeed *making history* in our day



YORKTOWN PENINSULA.—A most important locality is represented in this map. Comparatively few are the families in all our country who have not now a son, brother, father, relative, or at least a friend either in the Valley of the Mississippi, or in the region represented by our map. At Yorktown alone there are now probably over *two hundred thousand* armed men, including both sides. Richmond lies nearly *northward* of Yorktown, and is distant about 35 miles. (The map is on a scale of about 5½ miles to the inch.) To-morrows will be twice memorable in the history of the country. It was the scene of the last great battle of the Revolutionary War (1781.) Whether the final contest of the present war will be there, remains to be seen. That there will soon be a great battle at or near Yorktown, is beyond doubt. We give this map as the locality of one of the great centers of interest, and likely to continue such. The index in the lower corner is a guide to the points of the compass.

The Great American Pump.

Three years unbounded success—prices reduced—the best cistern, tank, spring house, and fire pump. It will not rust, will not freeze; throws 25 feet by hand—raises from all depths, forces to all distances and heights—safe and under tight. Send for drawings and prices to JAMES M. EDNEY, 476½ Broadway, New-York.

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THIRD (NEW) EDITION.

This work comprises in 32 pages all the particulars for successful Onion Culture, from selection of Seed to Marketing the Crop—being the practical directions given by *seventeen experienced* Onion Growers, residing in different parts of the country. Price 25 cents (or 3 stamps), sent post-paid. Address Publisher of *Agriculturist*.

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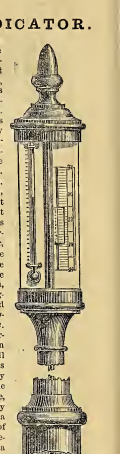
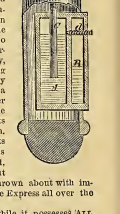


While in this age of invention and progress, our American Farmers have seized with avidity almost every invention and implement of husbandry that Art or Science could bring to their aid, one of the most important auxiliaries—the Barometer—has been almost entirely overlooked. This has arisen partly from a want of knowledge of its value and importance, but principally because the peculiar delicacy of construction, and high cost of the instrument have made it unavailable to the masses. In this instrument these objections have been entirely obviated. While its simplicity of construction, and scientific arrangement, render it perfectly portable and accurate, its cost is so low as to place it within the means of all. Indicating with unerring certainty coming changes in the weather, it also affords a simple and accurate medium for measuring heights, while the accompanying Thermometer gives the temperature. The Scientific American, Profs. Williams, Carr, Holmes, Dongan, and a host of public journals and scientific men, recommend it as the *Agricultural Barometer, par excellence*. Profs. Henry, Hackley, Maury, Drs. Arnot and Dick, have computed that an annual saving of five per cent. on all crops, might be made by its use, thus affording an annual saving of over fifty million dollars to the farmers of the United States. It is simple, durable, accurate, perfectly portable, and very cheap; is nicely finished, and affords a very beautiful and ornamental piece of furniture, some of the carved cases being very elegant. We give below a brief description of the principle of its operation.



A, is a glass tube, open at the top, and closed at the bottom by the bulb *B*. *C* is a cistern, filled with mercury, and *D* is a brass scale, graduated to inches and tenths. The tube *A* is filled with mercury, and the scale *D* is attached to the cistern, as shown in the engraving. The mercury in the tube will stand at a height proportioned to the pressure of the atmosphere upon the mercury in the cistern. When the pressure is increased, the mercury is forced up the tube; when the pressure is diminished, the mercury falls in the tube. The scale is graduated to correspond with the height of the mercury in the tube, and the pressure of the atmosphere is indicated by the number of inches and tenths of mercury which it will support.

The cistern, *A*, is of cast iron—cast with two compartments—partly filled with mercury. The tube *C*, filled with mercury, is sealed into the cistern, *A*, and being placed upright, the air is admitted by turning back the screw, *D*, which has a flat place filed in its side near the outer end, where air can pass through the outer wall, when the mercury takes its level, and it is in working condition. To make it portable, turn it upon its side, when the space mercury runs from *B* to *A*, filling tube and cistern, *A*, full—turn in the screw, and it is shut into *A* perfectly solid, and may be thrown about with impunity, or carried by Railroad or Steam Express all over the world in safety.

We claim for this instrument that while it possesses ALL THE INTRINSIC MERIT of other Barometers, it has several peculiar advantages possessed by none of them, while its construction is such as to avoid the objections to which all other instruments are more or less subject. Among its peculiar merits are

1st. Its accuracy, being a Mercurial Cistern Barometer, and constructed on strictly scientific principles. It has stood the severest tests of a great number of scientific men, and is amply recommended by those scientific authorities who had previously discarded and condemned the Aneroid and other ordinary cheap Barometers. For evidence of this we refer to the U. S. Coast Survey, Smithsonian Institute, and other eminent scientific authorities whose certificates we have.

2d. Its cheapness. While possessing intrinsic merits possessed by none other, its price is lower than any other reliable Barometer.

3d. It is perfectly and entirely portable, and can be expressed by stage or railroad to any part of the country with safety. THERE IS NO OTHER PERFECTLY PORTABLE BAROMETER.

4th. Its thorough construction and perfect simplicity makes it the most durable and perfect Barometer ever invented, and renders it impossible to injure or get it out of order, except by gross carelessness or design.

5th. It is unaffected by changes in temperature, which can be said of NO OTHER Barometer.

6th. Its beautiful finish and tasteful design render it a beautiful parlor or library ornament, while it affords a never failing study of interest to the man of leisure, cultivation and refinement, and a sure and reliable indication of the coming weather to all whose interests are affected by atmospheric changes.

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A Slight Cold, Cough, Hoarseness, or Sore Throat, which might be checked with a simple remedy, if neglected, often terminates seriously. Few are aware of the importance of stopping a Cough or Slight Cold in its first stage; that which in the beginning would yield to a mild remedy, if not attended to, soon attacks the lungs.

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Guaranteed pure and free from all adulteration.

Dr. Evan Pugh, President Penn. Farm School, in his report upon artificial manures through the Country Gentleman, March 27, 1862, says:

"Rhodes's is the cheapest American Superphosphate, and if Mr. Rhodes will sell super lead guarantee an article to contain 16% or 17 per cent of anhydrous Phosphoric Acid, as combinations soluble in water, (with ten minutes boiling,) his manure would be a very unprofitable investment—a use of the very best Superphosphates manufactured any where in the world, and very much better than any manufactured in this country."

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Gents:—I have analysed the two samples of Rhodes' Manure, which are averaged from a lot of one thousand tons at the works, and sent to me by Messrs. Potts & Kieth. Sample No. 1 contains of phosphoric acid soluble in water 16.84 per cent, equal to 27.5 of bi-phosphate of lime. Sample No. 2 contains 15.47 per cent, which is equal to 27.10 of bi-phosphate of lime. Both of these samples come fully up to the standard value of your Superphosphate.

Very respectfully, G. A. LIEBIG, Ph. D.

Agriculturists and dealers apply to HENRY E. MORING, General Agent for New-York and New-Jersey,
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PROVIDENCE COMPANY'S CONCENTRATED BONE FERTILIZER.

This is the best Fertilizer, at the price, ever offered to the farmer.

It is composed of pure bone, ground fine, with other materials added to give it greater strength.

It powerfully stimulates the plant from the moment the seed germinates until harvest.

It will not only fill the farmer's crib, but will enrich the soil, Try it.

It is packed in good flour barrels, and delivered to vessel or railroad, in New-York City, free of charge for cartage, at the following prices:

For one barrel, $2; two, $3 50; three, $5; four, $5 50; five, $6; six, $8 50; ten and over, $1 50 per barrel.

Two barrels will manure one acre of corn in the hill.

Send your orders, inclosing the cash, by mail, to

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Who are Sole Agents for the United States.

GENUINE

SUPER-PHOSPHATE OF LIME,

Manufactured from **Raw Bones,** dissolved in *Sulphuric Acid,* with a few important additions, at *$10 per ton,* by

A. LISTER & BROTHER, TARRYTOWN, N.Y.

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We guarantee every ton of our manufacture to be of uniform quality, and made from pure chemical analysis.

We also manufacture from RAW, (OR UNBURNED), BONES, the fine, medium, and coarse ground **Bone Manure,** for lasting as well as immediate effect on all kinds of farm crops. The coarse ground is particularly valuable for *Fruit Trees* and *Grape Vines,* which require a constant and lasting source of nourishment.

For sale in large and small quantities by

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Azotised Wool and Dried Blood
Fertilizer Co.

THIS MANURE by analysis surpasses all others offered in this country, and is infinitely cheaper. Send for circular and price quotes and for the benefit of farmers and cultivators. Send or call for a circular, and see samples.

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150,000 BARRELS POUDRETTE.

Send your orders early, and you will be sure to get them filled. Address GRIFFING, BROTHER & CO.,
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No. 1 Peruvian Guano—Warranted Pure.

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POUDRETTE,
FOR SALE BY
JAMES T. FOSTER,
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The large facilities which they enjoy by exclusive contract for all the night soil of the City of New-York, and large capital invested in their extensive works, enable them to manufacture an article which is superior to any other fertilizer in market, taking *cost* and *yield* into consideration. It will be sold at the usual price of $1 50 per barrel for seven barrels or over, delivered free in New-York City.

Please take notice that the office and sale of this Company's Poudrette is changed from Messrs. Griffing, Brother & Co., No. 60 Cortlandt-st., to No. 66 CORTLANDT-ST.

Other brands of what purports to be Poudrette are in market, put up in barrels to resemble this. Beware of frauds—buy that only which has the brand of the Lodi Manufacturing Co. Any other article is comparatively worthless.

We call the attention to the following experiences of practical farmers, in different sections of the country:

NORTH PEMBROKE, MASS., Oct. 7, 1861.

James R. Dey, Esq., President of the Lodi Manufacturing Co.:

DEAR SIR—The early autumnal frosts for several years past have seriously injured our corn crops, and rendered it necessary for farmers in this section to seek some fertilizer to give their crops an early start, in order to bring them to maturity in season to avoid that calamity. Having experimented with Guano, Superphosphate of Lime, etc., with indifferent success, in the Spring of 1860 I purchased four barrels of the Lodi Manufacturing Co.'s Poudrette, which I applied principally to my corn crop, with the most satisfactory results. This was the first Poudrette ever introduced into this vicinity. Last Spring I procured from your branch office in Boston about thirty barrels, the most of which I sold to my neighbors, who had witnessed the effect of my last year's trial, which, so far as has been heard from, has given universal satisfaction. To further test the efficacy of your Poudrette, this season I ploughed about two acres of light, sandy soil, which had laid in grass about six years, the last crop of grass being very light. This I planted with corn and applied to each hill about a table spoonful of Poudrette, with no other manure, except a handful or sauce to each hill at the first hoeing. And from present appearances we shall have a better crop than on a field of like soil where we used twenty-five loads of manure to the acre. Its effects on garden vegetables are equally apparent. I am, very respectfully, yours, &c.,

HORACE COLLAMORE.

MERRILL, Mc., Oct. 11, 1861.

Lodi Manufacturing Co.:

SIRS—I bought of your agents, Cross & Newell, two barrels of your Poudrette, and in using the first, I got sick of it and sold the other barrel. But the one that I used I found the principal part on potatoes. I used about half a pint to the hill, and the yield was equal to those plighted on manure at the rate of twenty loads to the acre. My neighbor, who bought the other part of the lot, has bought two barrels more, he would have saved the price of twenty barrels.

Yours, &c., V. B. PAUL.

WALDO, Mc., Oct. 12, 1861.

To the Lodi Manufacturing Co.:

Gentlemen—Last Spring I bought of Cross and Newell one barrel of your Poudrette as an experiment, but with very little faith in its utility. I put it on six rows of corn in different parts of the field, and the same row with barnyard manure, in the usual way—at the second time hoeing. Where I put the Poudrette the corn was twice the height of the rest of the field, and the row is one-third heavier, and has ripened about eight days earlier. I think it the very thing we want for shelling corn in this country, and shall use it more extensively another year.

Yours, &c.,
WELLINGTON MOOREY.

SMYRNA, Del., Oct. 1, 1861.

Gentlemen—I had heard of the Poudrette manufactured by the Lodi Manufacturing Co., and thought I would try a small quantity on a lot of land intended for corn, and as I could not get it nearer than Philadelphia, I went and bought of the agent, twenty barrels, and applied two barrels to the acre, dropping the corn and a handful of Poudrette to each hill. I left out a part of two rows, and put no Poudrette, to ascertain if there was any value in it, and noticed those two rows during the season; and where the Poudrette was used, the corn was decidedly the best, and I have no hesitation in saying it is a good manure. I shall use more of it made from one-third to one-half more by using it.

Yours, respectfully, JOHN G. BLACK.

CHESTER, Pa., Sept. 15, 1861.

To the Lodi Manufacturing Co.:

Gentlemen—I purchased this season of Messrs. Baker & Co., eleven barrels of Poudrette and one keg of Plumbe, which I put on my corn. I marked the place where I put the Plumbe, which, when started, looked well, but now the corn where the Poudrette was on is much the best. Last year I used Allen & Goodrich's new Fertilizer, which did no good at all, as the corn done better without the manure. I think the Poudrette made by your Company the cheapest manure in use.

Yours, &c., A. R. PERKINS.

The Company's pamphlet, containing directions for its use, with other valuable information and the experience of over one hundred farmers, will be sent free to any one applying for the same. Address,

JAMES T. FOSTER,
Care of Lodi Manufacturing Company,
66 Cortlandt-st., N. Y

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Strawberry Show

AT THE

OFFICE OF THE AGRICULTURIST,

41 PARK ROW (TIMES BUILDING,) NEW-YORK.

$50 IN PRIZES.

The Proprietor of the *Agriculturist* invites Strawberry Raisers, of this vicinity and elsewhere, to make an exhibition of their choice fruit on Friday and Saturday, June 20th and 21st,* in the spacious Office of the *American Agriculturist*; and to give zest to the exhibition, offers the following

PRIZES:

For the largest number of most approved varieties, (one quart each)..... $10
Second Prize..... 5
Third Prize..... 3
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For the largest three berries of one variety, (weight and size both being considered)..... 3
For the best New Seedling..... 3
For the best quart of White Strawberries..... 2
For the best flavored Strawberries (one quart)..... 2
For the best quart Triomphe de Gand..... 1
For the best quart Wilson's Albany..... 1
For the best quart Hooker..... 1
For the best quart Dewey's Seedling..... 1
For the best quart Victoria..... 1
For the best quart Jenny Lind..... 1
For the best quart Vicomtesse Hericart de Thury... 1

The berries to come in competition for the premiums must be upon the tables as early as 10 A. M. on Friday, June 20th,* and each specimen must be correctly labeled. The Awarding Committee will attend to their duties at 11 A. M.—at which hour the exhibition will open. When the premiums are awarded, the *names, places of residence* and of *business* of the exhibitors will be placed upon the specimens, and the prize samples designated.

The fruit will be subject to the order of the exhibitors at 4 P. M., Saturday, 21st.

* Should any peculiarity of the season require a change to be made in the date of holding the exhibition, notice will be given in the June *Agriculturist*.

An American Exhibition

OF

Pumpkins, Squashes, and Ornamental Gourds.

There will be a Public Exhibition of **Pumpkins, Squashes, and Ornamental Gourds,** at the office of the *American Agriculturist*, 41 Park Row, New York City, opening on Wednesday, Nov. 5th, 1862, at which the following prizes will be paid by the Publisher, upon the award of competent Committees.

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I. For the *Heaviest* Pumpkin or Squash... $20.00
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* All to be grown by one person and to be accompanied by an affirmed statement from the grower, and two disinterested persons who assist in gathering.

Note 1.—The specimens receiving the Prizes will remain on Public Exhibition at the pleasure of the Publisher who offers the prizes. The other specimens will be subject to the order of the exhibitors, or be sold at Auction or otherwise disposed of, for their benefit.

Note 2.—All Exhibitors must notify us of their intentions by Oct. 10th, and deliver specimens for competition on or before Nov. 3d. Specimens to be delivered free of charge.

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One Hundred Dollars are offered for the best five specimens of cotton grown above latitudes 38° and 40°, this year. See particulars in February *Agriculturist*, page 64.

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(And at no other time.)

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I. To any person forwarding, now or before May 10th, ONE subscriber to the *American Agriculturist*, at $1 a-year, (*to begin Jan. 1st, 1863.*) we will present (if desired) **Ten Plants of the Triomphe de Gand Strawberry,** forwarded free. These plants set in good soil early this Spring, will multiply greatly the present season, and furnish plants enough to start a large plot in August, for fruiting next year.

II. To any person forwarding, after April 1, and before May 10, TWO subscribers to the *American Agriculturist*, at $1 each, (for the year 1863,) we will send (if desired) **Twenty-five Plants of the Triomphe de Gand Strawberry,** to be forwarded free as above.

III. To any person forwarding, now or before May 10th, THREE OR MORE subscribers for the present year, (from Jan. 1,) at $1 each, we will present, **for each name, Fifteen Plants** of the **Triomphe de Gand Strawberry,** to be forwarded free as above.—N. B. When three or more names are sent together, the recipient may order, if desired, one-fourth of the plants to be the BARTLETT STRAWBERRY, a new and very promising variety.

N. B.—Three days before sending out the above plants, a printed slip or circular will be mailed to each person entitled to receive them, notifying him of the day on which the plants will be mailed, so that they can be looked for on their arrival. The printed slip will also contain directions for treatment of plants, soil, culture, etc.

(For other particulars see last month.)

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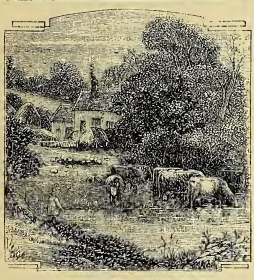


June.

"Amid his subjects safe,
Slumbers the monarch swain; his careless arm
Thrown round his head, on downy moss sustained;
Here laid his scrip, with wholesome viands filled;
There, listening every noise, his watchful dog,
Sight fly his slumbers, if perchance a flight
Of angry gad-flies fasten on the herd,
That startling scatters from the shallow brook,
In search of lavish stream.—THOMSON."

Of all months of the year, commend us to June for sight seeing and enjoyment. The poet's picture is in keeping with the month—the bank of a placid stream half guarded by woodland and half by meadow, the farmer taking his noon-day rest, the herd, the dog, and the speckled trout that we only think of under the bank. Nature is never so fresh and beautiful as now; the leaves that have lingered so long in buds, have burst all their encasements and are expanded to their full size. How delicate and glossy they are! How rapidly the wood is making! You can almost see the process of growth. Beneath your feet, the grasses are springing in the greatest luxuriance, and some are already waving their little plumes and tassels in the air. The endless verdure is relieved by the blooming dandelions, and buttercups.

And the mouths for which Nature has made ready this abundant supply, are here to be filled. The peaceful kine are grazing quietly in the meadow. They stop a moment to stare at you with their large liquid eyes, but only a moment, for they go to grass without any bidding, and will not rest until their maw is filled, and the noon-tide heat drives them to shelter. They make music as they move on slowly in column, plucking the grass like a band of reapers. When chewing the cud in the shade, with half closed eyes, they make another familiar sound suggestive of the fullest animal content. It is an anodyne for fretted nerves, to see them thus tranquil.

Yonder, upon the distant hill-side, you see the flocks of sheep and the young cattle that do not need to be brought home at night. They are a beautiful sight, with their lambs which are now nearly large enough to be separated from their mothers. They are not the less beautiful in the eyes of the farmer that they are turning the grass into money with very little of his labor or supervision. It is one of the delights of June that the days are so clear that you can see distant objects with the greatest distinctness. The clouds are brought down to you, and the far off hills and mountains become your neighbors. But the creatures that help man are by no means confined to his domestic animals. Here in the orchard are a multitude of birds, robins, blue-birds, woodpeckers, sparrows, and wrens, all busy helping him. They make money without thinking of it. Watch that pair of robins as they tend their young. First the mother comes with earth worms or caterpillars that she has plucked from the apple-trees. The little birds know the sound of her wings, and their mouths open with a murmur of delight as soon as she alights upon the nest. The worms are dropped into their mouths. She is hardly gone before her mate comes with his bill full of insects and thus the whole day is spent in catering for their young. Hundreds of noxious insects are thus destroyed each day, by every family of robins. The appetite of the young for animal food is astonishing. There seems to be no limit to their capacity to devour, save the capacity of the birds to bring supplies. Where insects are abundant, the growth of the young is very rapid; in a few weeks from hatching they are on the wing, apparently as large as old birds.

But we have some insects that hide under the bark, and burrow in the wood, doing their mischief out of sight of human eyes. The woodpecker is the artist to attend to these sly depredators. Murder is said to be one of the fine arts. It is, in the hands, or rather in the bill of the woodpecker. He perches in the top of an old tree, with his buoyant chivalric song, bidding all his fortified enemies "Wake up, Wake up," as if he would not surprise them, or take any advantage of their somnolency. He is in no hurry for slaughter. He hops along the limbs, scans the underside closely where the holes are most likely to be found. He knocks gently on the limb near the premises of the grub as if he expected a cordial invitation to come in. He stops to listen as if he would find out whether his gentle knock has waked up any body. Possibly he hears a gnawing inside as if his neighbor was retreating at the back door. He works sharp now and the bill is driven into the decayed wood with strokes so rapid that you can not count them. The chips fly, and the artist waxes warm over his work. At length he strikes his enemy, and with his long bill drags him from his hole and bears him off in triumph to the knot-hole cabin that you see in yonder tree. His young family have a feast, and another of the farmer's enemies is disposed of.

Listen again: here is another sound in the orchard. The apple trees are full of blossoms, and almost as full of bees, and the murmur of their myriad wings falls on the ear with a soothing melody. Their legs are covered with the yellow dust, suggestive of the price of their luscious stores. All the air between the orchard and the hives is a busy highway for these little laborers. They preach industry to man while they fill their hives with honey. There is a charm in apple blossoms, and bee-music is none the less pleasant to the farmer because they bring him money.

And now that we have taken it upon us to look up the humble helpers of the farm, we must say a good word in behalf of that much abused animal, the *Mephitis Americana.* You think at once of his bad name, of the eggs he has stolen, of the setting hens and turkeys he has broken up, of the roosts he has invaded, and the breezes he has polluted. Mr. Skunk is guilty of some misdemeanors, as all useful animals are. The eat catches your chickens, the dog runs mad and destroys man and beast with his virus, the horse runs away, smashes the carriage, and breaks your bones, the cow breaks down the shrubbery with her wicked horns, and the hogs get into the corn. They are all very good creatures in their place, not so good out of it. The same can be said of our hero. Possibly the hen-roost might have been made proof against vermin, and the fowls might have been confined to a yard—to your profit as well as to the safety of the eggs. If the eggs were out of place, the wandering animal whose instinct prompts him to eat eggs, wherever he finds them, is hardly so much to blame as the owner of the eggs. The eggs which you leave at loose ends are only a fair compensation for his services. All summer long he roams your pastures at night, picking up beetles and grubs, poking with his nose potato hills where many worms are at work. He is after the grubs, not the tubers. He takes possession of the apartments of the woodchuck, who has quartered himself and family upon your clover field or garden, and makes short work with all the domestic arrangements of that unmitigated nuisance. With this white backed sentinel around, you can grow clover in peace, and the young turnips will flourish. Your beans will not be prematurely snapped, and your garden sauce will be safe from other vermin. The most careless observation of his habits shows that he lives almost exclusively upon insects. While you sleep he is busy doing your work, helping to destroy your enemies. In any fair account kept with him the balance must be struck in his favor. Thus among the animals we often find friends under the most unpromising appearances, and badly abused men are not unfrequently the benefactors of society.

Calendar of Operations for June, 1862.

[A glance over notes like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 38° to 42°; but will be equally applicable further North and South, by allowing for latitude.]

Farm.

Tillage is the great work of this month. If a man is skeptical of Jethro Tull's philosophy, he can dissipate his doubts by stirring the soil early and late. Cultivate, harrow, hoe, plow, and by all methods, stir and comminute the soil. This allows the air free access to all the surface particles, saves every drop of dew and rain, and puts the growing crops upon their best behavior. It subdues the weeds, exterminates foul seeds, and cleans the land for future crops. It is a substitute for manure, and at the same time makes the most of the manure that is put into the soil. From twenty to thirty per cent can be added to the corn crop by good frequent tillage alone. Just what the philosophy of this result is, perhaps none of us can tell. The fact is very well attested. Do all the tillage possible with the horse or mule. Hand hoeing is expensive. If corn is in row both ways, nearly all the work can be done with the cultivator. It is not yet too late to supply missing hills of corn.

Barley is better sown early, but is less injured by late sowing, than oats. It succeeds best on a deep gravelly loam, well worked and free from weeds. It properly follows corn or any hoed crop. Plow the land, then harrow to leave it level, and after sowing the seed harrow and bush. Sow three bushels to the acre. Some sow four bushels and claim that it pays.

Barns and Sheds should be put in order for the hay and grain crops which will soon be ready for harvest. Take time by the forelock, clean out all foul stuff from the bottom of bays and mows, and put the scaffolding in order. If hay is mixed with weeds and sorrel do not save the mow seed, as so many are in the habit of doing.

Barn Yards—Cover the bottom with muck or loam and plow or harrow the droppings into it once a month. If there is any bad odor about the yard you are losing money. Composting with the plow is cheap.

Beans—Plant early where corn has failed, and in soil wholly devoted to them. They do better on light land than most other crops, and are very profitable both for the family and for the market. Plant the best smaller varieties. There is a difference of one half in the price of the poorest and best field beans. Plant abundantly.

Beets—Mangel wurzel and sugar varieties sown early this month, will have plenty of time to mature for winter feeding. They save hay and grain, not only in feeding cattle, but pigs. Sugar beets make swine thrive, along in the early fall. Have a full supply for them.

Butter, if well made and packed during this month, will keep throughout the year. Cleanliness and thorough working are the two essential points to be observed. The milk room should be well ventilated, cool, and free from dust, insects, and offensive smells. Experiment to learn if this be true; note also the quality of the butter. In sending butter to market, have the cask or pail look neat and inviting, and plainly marked. New tubs should be well scalded with buttermilk and brine before packing, to remove the flavor of the wood.

Cabbages—Plant out for late crops. Hoe and cultivate between the rows of those previously set, *at least* once a week—the oftener the better. Set plants between the rows of early potatoes, which are to be dug about the first of July. Examine often to destroy cut worms and other insects. A farmer can not well have too many cabbages. They can be kept until May as well as a potato, and are cheap, succulent food for cattle, pigs, and poultry, all through the winter.

Carrots—Sow both as a general crop and as a succession to onions and early potatoes. The sooner they are sown the better. If the soil is deep and rich, sow fourteen inches apart for hand cultivation, and only four inches for horse cultivation. They may be sowed between the rows, to succeed onions; leave every third space vacant to afford room for curing the onions when pulled.

Cheese—Try to improve the quality, rather than to increase the quantity. "White-oak" cheeses are always a drug in market, while those of first quality are always in demand at good prices. See communication on page 182.

Cattle—Young cattle, especially calves of the present season, need attention to keep them growing. Allow them the best pasture. Remember the first year of an animal is the most important. Good cows and oxen do not come from stinted calves. Keep them out of the road.

Corn—A good crop of the R. I. Premium, Canada Yellow, the true Dutton, or the King Philip, may be obtained, if planted during the first week of June. Indeed, most kinds of corn, (except the very large sorts which require a long season for maturing,) may be planted at this time. Some good farmers do all their planting as late as June 1st, soaking and tarring the seed, rolling in plaster, and manuring in the hill with compost manure, superphosphate, or Peruvian guano mixed with plenty of soil. Go through land already planted, with the cultivator and hoe, clear out all weeds and grass, thin the corn to four stalks in the hill, and replant missing hills. Sow and drill both the dent (tooth-shaped) and the sweet varieties for cutting green in August and September. In land troubled by moles, run the plow through both ways as soon as the corn is up, and as often as their runs are established.

Grain Fields will whiten to the harvest in southern localities. Wheat or rye should be cut as soon as the berry is advanced enough to bear moderate pressure of the thumb-nail, without breaking, or just after it leaves the "milk." Examine the fields for the earliest and best portions, to be left to ripen fully for seed. Save no grain for seed from weedy fields. Much of the profit as well as pleasure of farming depends upon clean seed, which makes clean fields.

Haying will begin in the early situations and well drained and manured fields. Cut grass or clover for hay, just as the bloom is passing away, and the seed commences to form. If left later, much of the nourishing part of the stalk is lost in the woody fiber. (See article on Hay Caps, page 173.) Hay Caps will enable you to cure much of the hay in the cock, which will give a better quality of fodder. Mowing machines and horse pitchforks will pay on all farms, where there is much grass to cut.

Manure—Turn every source to a account, as recommended in previous numbers. Take a wheelbarrow from the garden, etc., into the pig sty, and su ply the swine with plenty of material, to work over at their leisure. Deal largely in peat and muck, or loam and sods in their absence, during this month. Decomposition goes on rapidly in hot weather. Better pay double price for help than to have your yard and sheds bare. Manure is the sheet-anchor of good farming.

Millet is one of the best forage plants, well adapted to soiling. Sow any time this month, best before the middle.

Peas—Sow or plant at once. They make excellent food for swine, when fed green with the straw, or ripened and ground with the cob, or when fed alone, cooked or soaked. Hogs will grow and fatten well on peas, but need corn to finish off upon.

Potatoes—Keep well hoed until blossoming. Hill moderately, or not at all. Top-dress with ashes and plaster.

Poultry—Compel them to lay in their appropriate places, by confining them in the poultry yard until after noon. Allow none to sit after the middle of this month. Meanwhile whitewash their apartments monthly, and use the fresh droppings mixed with plaster in the garden, and to make liquid manure.

Rutabagas and Rock turnips should be sown or transplanted from the 20th to the last of the month for field culture, if designed for cattle. Plant in drills two feet to thirty inches apart. Young plants of these varieties are as easily transplanted as a cabbage. They make a good succession crop to early potatoes. Manure with bone-dust, superphosphate, or Peruvian guano.

Sheep washing and shearing demands the attention of the farmer with the first settled warm weather. Read article in May number, *Secular Cut*. Mark each sheep plainly as soon as sheared, and designate ewes having superior fleeces, with a special mark, that they may be reserved for breeding. Dock and castrate lambs, if not already done, and guard against the fly by smearing wounds with tar. Look to the foot rot. See article on Labelling p. 173.

Sorghum—Drill or sow broadcast for cutting and feeding green, or to be cured for winter fodder.

Sugar beets and Mangels—Sow first week if possible or before the 20th, in mellow, rich ground; drills 2 feet to 30 inches apart, or the rows in pairs a foot apart and 3 feet between the pairs of rows—for convenience in cultivating. The plants should finally stand 8 inches apart.

Swine—Keep them growing with whey and milk from the dairy, mixed with ground feed. Give them the range of the orchard, to destroy grubs and worms in unsound fruit. A good clover pasture will afford them excellent feed. Give them plenty of pure water.

Tanners' Bark—Peel from hemlock and oak, as soon as it will "run" freely, and pile it when partially dry, so as to protect from rain.

Tobacco.—Prepare the ground for receiving the plants and transplant them, if possible, on some rainy day about the 15th, at any rate before the 25th. (See article on p. 168.

Tools, particularly for haying and harvesting, should all be in readiness before the season of use.

Weeds grow rapidly and soon produce seed, if left during this month. Thistles should be persistently cut with the spud below the surface. Lizards or Snapdragon may be *smothered* by sea-weed or swamp hay. Clean tillage *pays*.

Orchard and Nursery.

If the orchard has been well attented to in former years, it will require little care now. The caterpillar nests should be pulled down as fast as they appear. This can be done by running a pole with one end split into the nest, twisting it until it is completely torn from the branches. Select early morning or wet weather when the occupants are at home, to demolish their houses—and themselves.

The middle and latter part of June is a good time for the general pruning as heretofore advised. The wounds now made harden well, and the new wood immediately begins to cover them. Look to the young trees particularly, and see what shape they would assume, and whether the branches would be too crowded when fully grown if all the limbs are suffered to remain. An open head is particularly desirable, and to this end quite likely a portion of the inner cross branches will need cutting out with the pruning knife, and head them back if running up too strong, or some of the outer limbs are pushing out of symmetry. A vacancy on one side of the tree can soon be supplied by cutting the adjacent branches to buds upon the side to be filled. If the old orchard has been neglected and it is desirable to remove large branches, they should be taken off with a fine saw close to the trunk of the tree, or other limbs. It is also advisable to coat the sawed space with a solution of gum shellac, dissolved in alcohol to the consistence of thin molasses, putting it on with a camel's hair brush. By all means, spare time enough to give the orchard its annual pruning now—it will abundantly pay. After a little practice, a glance will tell what branches should be removed, to form a well balanced, tolerably compact head, with few inside crossing limbs. Two extremes should be avoided. One is, the cutting out of all the central shoots, and encouraging a tall or wide-spread growth. This leaves the bearing portions high in air, where they are swayed and thrashed by high winds, with a long distance for the fruit to fall; it is also inconvenient to pick. The branches are often so spread with the weights upon their extremities, as to split them down. Again, with the pear especially, there is not sufficient shade upon the main branches and body of the tree. The other extreme is, heading back too strongly, and not cutting out the center sufficiently. We have seen the branches so thick and interwoven, that it was almost impossible for fruit to grow, or to gather it.

Stimulate the growth of both old and young trees in a poor soil, by a liberal coating of manure about the roots. Remember that new wood and fruit spurs are wanted this year, to bear next season. Shortening-in in June checks the flow of sap, and tends to the formation of fruit buds. A stout cord or strap, fastened around the body of a young tree, or the main branches of older ones, tends to the same end, by compressing the sap vessels, though this is not generally advisable, except in the case of persistent non-bearing trees.

Look to the grafts set early in spring and renew the wax or clay where needed. Rub off the natural suckers.

The borer-moth will soon be at work, laying eggs about the base of the apple, pear, peach and quince trees. Keep everything clean about the trees that no protection be afforded either to the millers depositing the eggs, or to the eggs themselves. A newspaper tied around the tree, close to the ground, or for one foot or more above, will usually save the trees. If fearful that eggs are already there, wash the body with strong soap suds, or potash and water. The same wash will remove scale or "lice," which are now quite small, and easily rubbed off. See article on destroying insects on pages 141 and 177.

Evergreens may well be transplanted early in June. Besides attending to this in the nursery, let the newly planted and exposed orchard have a belt set upon the sides most affected by the prevailing winds, as advised last month. A mulch of straw, or fresh cut grass, spread about the roots of newly planted trees, will keep the ground moist in dry weather. A frequent application of *hoe* will serve a similar purpose. By no means allow a mat of grass or weeds to grow around young trees. The horse and hand hoe should also be kept at work in the nursery to lighten the soil and keep down weeds.

Kitchen and Fruit Garden.

The excellence of most table vegetables is in proportion to the *rapidity* of their growth. However, too great forcing sometimes throws the growth into tops and leaves rather than into the roots, but the two generally bear a close relation to each other, if the seed is good. There are a few general principles which every gardener should bear in mind. Do any hand weeding, but neither hoe nor stir the soil in wet weather. The drier the weather, the more beneficial is it to stir the surface, provided the rootlets be not touched. Liquid manure must be used with extreme caution in dry weather, and its effects are much more noticeable in showery times. Watering once commenced must be continued—watering the *plant* is of

little avail, but it is the *soil* which should be moistened all about the plant, and that too below the surface.

Asparagus may be injured by too long and too close cutting; when green peas and string beans come, let it grow. It should not be cut much after mid-summer, (June 20th)

Beans may be planted any time during the month, but it is desirable not to delay much after the first; even Limas will do well when planted the first week in June, if they have frequent hoeing and liquid manure.

Beets—Sow long blood, and blood turnip, in mellow soil before the 20th, for fall and winter use. A handy way to sow beets or mangels on a large scale is to make a wheel of a two inch plank and insert pins 6 inches apart, to mark inch-deep holes in rows; put two seeds in each hole and cover by hand. Thin and hoe as soon as the rows show.

Cabbages, Cauliflowers and all the family may be transplanted any time during the month, for Autumn use.

Carrots sown now will make a good crop.

Celery—Sow for winter crop, and prick out young plants to have a good supply of well grown stocky ones for transplanting in July. For fall crop, transplant about the middle or last of the month, in trenches 4 feet apart, a foot deep and well manured and mellow.

Corn—Continue to plant for succession, until July 4th; plant none but the sweetest. Hoe frequently.

Cucumbers, Melons, and Squashes—Put in cucumbers for pickles any time during this month. Remove gauze frames before the plants crowd them. Occasional watering with liquid manure, made by mixing fresh cow droppings, or hen manure with water, will repel insects, and rapidly forward the growth; dust with ashes and plaster or lime. The striped bugs may be easily taken early in the morning, while the dew is on, and destroyed. Examine the under side of the squash leaves for eggs of the squash bug; hundreds may be killed before hatching.

Egg Plants—Transplant into good soil abundantly enriched, best with horse manure; hoe and water frequently.

Insects—June is the month in which they do the garden most damage, and constant vigilance is the price of freedom from their depredations. Whale-oil soap, very dilute, and successive flocks of young chickens or turkeys, to be removed as soon as they begin to do any damage, are the best preventives.

Lettuce—Few varieties do well after mid-summer. The Tennisball and Curled Silesian grow as well as any. Sow or transplant into partial shade, and water frequently.

Onions—It is important to force a quick development, hence direct seed onions to three or four inches and stir often. Potato onions (the best for the family table,) may be planted as late as the first week in June, eight to ten inches apart. For pickles sow rather thickly in poor soil.

Parsneps may be sown early this month; keep the surface mellow; they enjoy liquid manure.

Peas—Sow for late Summer use and for seed. They will not be troubled by bugs if sowed after mid-summer.

Potatoes—Late plantings often do very well, escaping rot when early ones suffer, but the reverse is oftener true.

Radishes—Sow spring varieties among other crops where they will be partially shaded. Winter varieties, (Black Spanish, Late Brown, etc.,) last of the month for use in August. Leave some of the early crop for seed—and for seed pods to be used for pickles.

Rhubarb—Cut up and dry or bottle a good supply for winter use. Let no seed stalks run up.

Tomatoes—Transplant for main crop; use a broad shingle or two to protect from the sun at first, and after a day or two, shift it so as to reflect the heat upon the plant. Hoe frequently, and pinch in some of the leading branches to give a bushy habit and earlier fruit. Hang the vines over poles slightly inclined, to keep the fruit from the ground and to give them air.

Turnips—Sprinkle with plaster when the dew is on to drive off the ground flea.

Weeds which come from seed are easily killed and there is no excuse for the gardener who allows them to be seen, any more than there is for a boy with a dirty face. Those from subterranean roots are more difficult to get rid of, but faithfulness will in time do the work.

Vacant Spots—No good gardener has any. There is almost always something which may profitably occupy them; if not, sow oats or rye, on even very small spots, and spade it in when you want to use the plot.

SMALL FRUITS.

Blackberries and Raspberries—Keep all canes, including new growth, properly tied to stakes or trellises. Allow only those new shoots to remain, which are wanted for next year's bearing, unless they are needed to make new plots. If specimens of large fruit are desired, thin the clusters and berries, leaving only one or two clusters on a cane, and water freely during dry spells.

Currants—Keep the bushes in good form by pinching in to short spurs: this will save the necessity of further pruning, except to remove dead wood. Keep the ground around them loose, and free from weeds. Water the bushes with soap suds, and other wash from the house. Pick the fruit for jelly as soon as ripe; for wine-making, now much practised, it is better fully matured.

Fruit Trees—Keep dwarf pears and other fruit trees trained to good shape, by pinching out superfluous shoots as they appear, and checking the production of much wood. Trees transplanted this year, or last fall, should not be allowed to mature any fruit unless their growth is very vigorous. If cherries can not be marketed, preserve them in bottles, or remove pits and dry them.

Gooseberries—Keep the surface of the ground moist by frequent stirring, mulching or loose stones.

Grapes—Proper care in pinching out unnecessary shoots, and shortening in too rampant growth, will obviate the necessity for severe cutting in the fall, and the strength of the vine will be retained in the remaining canes. Continue to watch against insects, and mildew. For the former, showering with whale oil soap, or other solutions, from the syringe or hydroputt, will dislodge many. Others must be removed by hand; for mildew, dust with flowers of sulphur, freely.

Strawberries—Remove all grass and weeds, and mulch the ground with tan bark or short straw, before picking commences. Keep the beds well watered while fruit is forming, if there be dry weather.

Flower Garden and Lawn.

The earliest harvests of the year are gathered in the flower garden. The blossoming is to us fruition—and in June Nature's lap is full of flowers. Seed time still continues, many annuals may be sown. It is well to sow a little deeper than in May, and sometimes to lay a light board over the spot for a day or two, so as to keep the soil moist, but to remove it before the seeds begin to start much. Seeds of biennials may be sown at any time during this month or next, though with many kinds a tolerably long season, and vigorous growth the first season are essential to perfection of flowering the next.

There may be much taste exercised in the location of annuals and bedding plants, so that as they come successively into bloom, the garden may not appear bright and bare in spots, nor get mixed up blue and white and red and yellow, like the old fashioned style of "splashing" book edges—but so that there shall be a profusion of flowers growing in masses all over it. A mass of bloom need not be large, but only enough to destroy the awkward, lonely effect of single flowers or spikes of the same kind, looking up here and there all over a garden, but each by itself. This remark is not applicable to the more independent and robust flowers like foxgloves, balsams or Dahlias, which often are very effective quite alone.

Bulbs—Spring blooming bulbs when they have passed the flowering, should stand a while in the ground; then be lifted, with so much earth only as adheres to the roots, and laid with their labels in empty flower pots under some cover where they will dry in the shade, and will not be wet by rains. When dry remove the tops, wrap in papers and keep dry until planting time in the Autumn.

Climbers of all kinds should be kept within bounds, and under good training. Their appearance is greatly improved by very little time occasionally given to them.

Dahlias should not be allowed to blossom too early; a little early pinching in gives a much finer and better flowers late in the season when the weather is better adapted to them, and flowers are more double and last longer.

Evergreens—June is emphatically the month to transplant evergreens with best success. See article on p. 179.

Grass Edgings and Borders—Keep closely cut and trimmed always. If it burns in spots or looks ragged, water with liquid manure, and sift on a quarter of an inch in depth of fine loam.

Gravel Walks—First, plenty of gravel often raked; second, a good roller, often used; third, a shuffle hoe, to cut up weeds wherever they appear, are what will secure good walks. The weeds are left to dry and disappear on the surface, when not neglected, and grown too large.

Geraniums and Pelargoniums struck from cuttings in the open ground and which you intend to preserve, should be pinched-in freely, when they begin to grow rapidly, so that they may form compact, handsome, apple-tree-like tops, old plants require similar care or they will grow out of shape.

Hedges—Clip full grown hedges as often as they make growth enough. Evergreen hedges are best trimmed before they make their new growth. Young hedges must be pruned severely to force low branching. It is very easy to get top branches, but impossible to thicken up a neglected hedge near the ground, and such a hedge is neither ornamental nor useful.

Insects—Rose slugs, destroy with whale oil soap. The solution should be very dilute, and applied with a garden syringe and not a sprinkling water pot; they are on the underside of the leaves. This is also a defense against other insects. See *Insects* elsewhere in the Calendar.

Lawn—The grass of the lawn should be mowed just as often as a sharp scythe will cut *anything*. If you have water supplied in pipes from a head, by all means have a hydrant situated so that with a hose the grass may be often sprinkled. If moss comes in, after scarifying with a rake, a sifting of soil ¾ inch deep over the spot and a sprinkling of wood ashes, with a little salt, on the surface will probably destroy it.

Pinks and Carnations—As soon as they have done blooming, cut the main stalks back, and layer the side shoots. Cut back, whether you layer or not, for the flowers will be finer for it. Give seedlings plenty of room.

Potted plants require constant care and frequent watering; if the pots be sunk they require less, but must have water in dry weather.

Roses! Roses—Is there a family in this wide land with a rod of land attached to their dwelling, that has not a rose bush? Roses grow wild in almost every country, and by cultivation the number of varieties is rendered almost infinite. So numerous are they that the Horticulturist shrinks from enumerating even a few of the best sorts. The country gardens blush with them, and city corners and market places are redolent with their perfume. Severe cutting back after the bloom has nearly past, will secure on many varieties, particularly such as ordinarily bloom twice in the season, a full bloom again much sooner and better than otherwise. If roses depended upon for fall bloom are cut back to the sacrifice of their flowers at this season, they will blossom much earlier and finer for it. Keep climbers from whipping about in the wind, by binding them to the pillars or trellises. Prune all roses as soon as they have done flowering, letting no seed remain except on those varieties of cluster roses like the Sweet briar on which the clusters of coral-colored hips are so ornamental.

Seed Stalks—As soon as the flowers are past, remove the stalk, unless seed is wanted, in which case tie it up, or mark it in some way so that it shall not be disturbed. A heedless person in the garden may destroy some very choice seed if it be not protected in some such way.

Transplanting—As a general rule, transplant in wet days. If the plant can be moved with some earth, water the soil after it is set out, but if the roots are bare, add water at the time of setting out so as to cause the soil to settle about the roots. Protect well from the sun.

Verbenas need to be watched and pinned down so as to cover the whole bed allotted to them as speedily as possible. Ladies' hair-pins are excellent for this purpose. If the flower heads are all pinched off before they blossom it will greatly expedite this, and as soon as the bed is covered, it will burst into a sheet of bloom.

Green and Hot-Houses.

Most of the occupants of these houses do best in the open grounds. Some of the tropical plants, and others which it is desirable to multiply as fast as possible, are still retained under glass. Cuttings strike more readily inside, where moisture and shade are regulated at will. The remaining plants require an abundance of air, and should be watered frequently. It is now time to make provision for a stock of Winter blooming plants. Unless cuttings are put in soon, the plants will not have sufficient age and vigor to flower freely. A good supply of materials for potting soil should also be collected. Such compost or mixture is better after laying several months.

Camellias do well in the open border in partial shade. If retained on the shelves in the house, water and syringe often. Watch for and check the approach of insects. Cut back to a bushy well formed head.

Composts and Potting Soil—Composts make faster and better in the heat of summer than at any other time. Prepare rich compost of wood mold and fine manure, with a little garden soil, with any other desirable enrichment and work it over frequently. Before use it must be largely diluted with additions of pure peaty soil or wood mold, with lime and sand, and a shovelful of ashes and gypsum to the bushel. Have a good supply of properly prepared potting soil at all times in readiness.

Cuttings of Chrysanthemums, Myrtles, Hydrangeas, Fuchsias, Geraniums, etc., intended for blooming next season, may be made and potted.

Geraniums are in full flower, and should be watered freely. Insert cuttings and make layers to increase the stock of desirable kinds.

Potting—Many of the rapidly growing plants will now require more room, and must be transferred to larger pots.

Seedlings of sufficient size should be transplanted either to small pots or set in the open borders.

Water—Give as may be wanted. A little may be necessary night and morning upon plants in small pots in a dry atmosphere, too much endangers damping off.

Grapery and Orchard-House.

In cold graperies, thin the clusters of superfluous berries, and support the shoulders if necessary by tying to the cane or wires above. Cut off the bearing branches two or three leaves beyond the cluster and stop the laterals when they start successively, leaving one leaf only. Maintain abundant moisture up to the time that the fruit begins to color. Grapes in early houses will be ripening: watch against mildew on all—and dust with sulphur. Withhold sprinkling overhead when the clusters begin to color, and maintain a drier atmosphere. Whitewash, or otherwise shade the glass if there is danger of sun scorching, and give free ventilation.

Peaches and other house fruit, after a judicious thinning out last month, will simply require Summer pruning or pinching-in, to prevent too great a growth of foliage and to mature the next season's bearing wood.

Apiary in June.

Prepared by M. Quinby—by request.

More swarms will issue in this month, than in all the others of the season. A few stocks will send out a swarm before being crowded, or even full of bees. Others will be full, and a large part of the colony crowded outside for weeks before issuing, and sometimes remain in this way throughout the season. When an increase of colonies to the fullest extent allowable, is desired, there is hardly a season so poor for honey, that such stock may not be made to furnish one swarm at least, but they must be attended to in season, and a swarm *forced* out. An artificial swarm when established early, will do equally well with those issuing naturally. With the movable comb-hive an artificial swarm is made as readily as any way, by the process given last month for preparing colonies for Italian queens. All there is about it, is to divide, and examine afterward to see that each has a queen. It would be well to rear a few queens in the way given, (if you do not have the Italians) and introduce them, without making it necessary for the colony to rear one. The gain in the time of breeding will pay for trouble, beside the satisfaction of understanding a little of very curious natural history. It has been ascertained that a queen bee will lay from one to three thousand eggs in twenty four hours. It follows, that in the two first days of the lowest rate, she would deposit 14,000 eggs, which a good colony would mature—enough for a large swarm. But this is not safe to divide the second time, unless the season for honey proves to be extraordinarily good. Artificial swarms are not so readily made with the box hive, because the bees fly from the hive with a stick or hammer,a few times lightly : leave them quite five minutes, when the beating may be continued up to twenty minutes if necessary to get two-thirds out. You can now raise and look under the hive without any danger of stings. If the queen is with the new colony, they will be quiet after fifteen or twenty minutes; if not, they run uneasily about. When there is not room to set the box on each side of the stand as directed in May, the old one may be set in front of the other, moving either a little to equalize the bees as required.

Between two and three weeks after the first swarm, a stock is more liable to become queenless than at any other season; and after such swarms as are accompanied by young queens—in from one to five days. The loss may generally be known the next morning, and sometimes at evening, by their uneasy movements. It is important in such case, to give them a mature queen, or at least a cell containing a queen. They would probably rear one if brood was given them, but it would take about six weeks to get a queen and her brood ready to hatch; by this time the colony would be very much reduced.

The surplus boxes should now receive attention. As fast as the hives become full of bees, the boxes should be added. The new swarms may have them immediately, when very large, or when two good swarms have united. Take out a few with empty ones in the first as filled, fasten in the top of each box before using, strips of straight, even white comb, to secure regularity.

To keep the Italians pure, two methods have been recommended. One is to isolate as far as possible from all others. It is found that they will mix at a distance of two or three miles. It is necessary to have a colony or more that will furnish drones, to stand near the young queens to be impregnated. These, with native drones are in the way at home, must be removed to a distant yards. The stock that is reared for queens from, may be at home—unless it should be the only one to furnish drones—as well as the boxes for rearing the queens, until the cheens hatch, when they should be taken to the yards where the Italian drones are. Let them stand about eight days, or until the queen begins to lay. She may now be introduced, and the box and bees may be used to rear another queen. Although a dark colored queen *may* raise light colored bees, it is not apt to do otherwise, and I suggest that such be not used for breeding.

Another method of changing an apiary to the Italians, where there are a large number of bees, may be on the whole less trouble. Thus: take no pains to isolate, but rear the queens (from pure Italian brood) at home, and let them mix with the native drones. These will produce *pure drones*, but mixed workers. Introduce such a queen into all the stocks, the next season, perhaps before : if done soon, *all* the drones will be Italians. Now raise another set of queens from the pure one, and they will unite all the stocks, the next season, perhaps before : if done soon, *all* the drones will be Italians. Now raise another set of queens from the pure one, and they will quite certainly meet the Italian drones, and after all their produce will be pure. One queen will furnish eggs enough to rear five hundred or a thousand queens in one season. *Errata.*—In Apiary for May instead of "set over cover *two* boxes," read "set over cover *to* boxes."

Containing a great variety of Items, including many good Hints and Suggestions which we give in small type and condensed form for want of space elsewhere.

Crowded Over.—50 "Basket Items," in type.

Notes to Crop Reporters.—(1.) We are sorry to learn that, *by the delay of the mails*, the BLANK forms did not reach several persons in due time. They should have arrived on or soon after May 1st. This perhaps explains why many made no return in season for the present paper. If any one whose name is sent in has failed to get a copy of the blank forms, please let us know promptly. We have stereotype plates to print all required. Extra copies can be supplied to Farmers' Clubs, or others needing them.—(2.) Please make up the reports as near to the 10th day of each month as possible, and mail so as to have them reach this office on *or before the 15th, without fail.*—(3.) Only the crops largely cultivated in any county need reporting in columns **W** and **X.** The main object is, to get at the amount and prospects of the leading crops which are to affect the market prices.—(4.) Further inquiry and investigation may lead to a different estimate for columns **B, C, E, F, H, I, etc.;** please fill them up anew *each* month.—(5.) The State, County and name, should always be filled in at the head of the blanks. The omission of this in three reports, compelled us to leave them out.—(6.) We have assigned a *Register Number* to each name, as will be seen in the tables page 186. It will greatly assist us in compiling and comparing the tables, if each reporter whose number is given, will mark his own register number plainly on the left of *each* monthly report.——(7.) Letter Postage is required for the blanks written on. Though this is a public enterprise, from which we can derive no special pecuniary benefit, while it involves hundreds of dollars, in expense and time, in preparing blanks, collecting the returns, etc., we shall quite cheerfully bear all the cost, and those sending the reports may prepay postage to 15 cents from their next subscription account. We would inclose the stamps in a letter but this would require extra labor, and additional outlay for postage. We trust those who take the trouble to collect and forward the reports will find abundant satisfaction in their labors, by the usefulness to the country at large as well as to themselves, of these reliable statistics. If such information were collected by the Government, as it ought to be, an appropriation of twenty or thirty thousand dollars would doubtless be required to gather no more useful reports than those we shall give.

The Strawberry Show.—In anticipation of a fine show of this delicious fruit, which so charmingly hand in hand with the rose, introduces the season of fruits and flowers, we again invite all who are interested in Strawberries, and their culture, to visit the office of the *Agriculturist* on the 20th and 21st of this month(June). Persons intending to exhibit are referred to the announcement of the show on page 192, in which a slight change has been made. We should have a few days notice of the number of samples we may expect from the principal exhibitors, in order to provide for all, and hope this suggestion may be complied with. The results of this exhibition will, we hope, prove by careful weighing and measuring single berries and quarts, that a decided advance in strawberry culture has been made, and that in this, America may offer a challenge to the world.

Strawberry Premiums are again offered for August, at which season, plants of new growth will be vigorous, and ready for transportation by mail or otherwise. See particulars on page 192.

Fruit of Sorghum Seed.—We are getting returns in various ways from our distribution of this seed five or six years ago, and now by mail receive a sample of excellent and beautiful, light colored sugar from C. Cory, of Lima, Ind., whose interest in the culture of the sorghum is widely known. Mr. Cory received the 2d and 3d premiums at the Sorghum Convention in Adrian, Mich., in April, and is the inventor of one of the approved evaporators now claimants for public favor. His interest in this subject dates from the reception of the seed distributed from the *Agriculturist* office.

South-down Sheep.—Mr. Taylor, of Holmdel, N. J., has exhibited no little enterprise in his efforts to introduce improved sheep into our country, and we hope his Show and Sale, advertised in this paper, will attract the genera. attention it deserves.

Humbugs.—The reader should set it down as a general rule that those unknown dealers who offer the most certain cures, and the largest amount of gold, silver, precious stones, books, pictures, engravings, and what not, for the least money, and who tell the most plausible story, are in nine cases out of ten those who give the least return for money invested with them, if, indeed, they make any return at all. Poor, worthless copies of engravings with high-sounding names, can be got up at trifling cost. Any one having a business that will pay a high salary "and found," can hire plenty of persons at his very doors to take the situations offered. A very large number of persons who have written to us, and who may hereafter make inquiries after this and that splendid money-making scheme advertised, will please consider the above as an individual answer. When they inquire about a good thing, we will try to respond; but in this matter, silence must *not* be construed into approval.

The Bureau of Agriculture referred to last month, has received the sanction of both Houses of Congress, and the President. The new Department is to be under the almost absolute control of a "Commissioner of Agriculture," nominated by the President and confirmed by the Senate. With a right kind of a man at its head, great good might result. We fear, however, that our worthy President is too much engrossed with other cares to give the subject due consideration, and that, as usual in such cases, he may nominate for the office a man without suitable qualifications. The fact that Watts was a good gardener at the White-House, did not prove him fit to be a "Brigadier General;" nor will the fact that any man is a good florist, or a successful wheat grower, or an excellent dairyman, be a guarantee that he can look after and foster the general and varied agricultural interests of our country. We repeat, emphatically, what we stated last month, viz., that only an energetic man, of the highest order of intellectual and administrative ability, should be appointed to the station of Commissioner of Agriculture, in this, the greatest agricultural country of the world.

Large Farms for $10 Each.—Newspaper advertisements and circulars, without number, have for years past announced "homesteads" and "farms" for from $1 to $5 per acre, and "lots" for a little more for a plot 20x100 *feet* in some village to be about to be, or a little larger area in some man-avoided place, away out West. This humbugry is all done away with now. Uncle Sam has stepped in and generously offers **80 to 160** acres of land to every head of a family —male or female—who is a loyal citizen, native or foreign born. The only conditions are, that the recipient pay in $10 to meet the expenses of the survey, etc., and go upon and occupy the land for a period of at least five years—in other words, make it his or her *homestead.* Minors, who have served at least fourteen days as volunteer soldiers,can choose a farm of any unoccupied lands belonging to the Government. Of land sold at $1.25 per acre, 160 acres are open for free entry ; of those now valued at $2.50 per acre, only 80 acres can be chosen. We will publish the Law in full, in the July *Agriculturist*: it was signed by the President at too late an hour for us to crowd it into this number, already over-full.

The Dog Show at Barnum's.—There has just closed at the American Museum in New-York, a very interesting exhibition of dogs. The chance of Show-ists," offered very liberal prizes—from $1000 for the largest and handsomest dog, down to 2d and 3d premiums for the best dogs of various pure breeds, both useful and ornamental. An immense Siberian bloodhound took the $1000, but to enumerate the others which for great beauty, and grace, or for faithfulness, sagacity, power, or ferocity even, gained the admiration of thousands of visitors daily, is beyond our power, for lack of space. Exhibitors may not in all cases have coincided with the Committees who made the awards, but the public was gratified, and Mr. Barnum's reputation has not suffered.

Apropos.—Mr. B., has announced a Baby show which promises to amuse the public as much as did the form er one. An 8 months old, 1½ lbs. baby, will be there.

Noticing Advertisements.—Twenty or thirty of our advertising patrons have requested editorial reference to their business notices, and we would cheerfully do so in some cases ; but that would be unjust to others, and we must treat all alike, by advising our readers to look at all—for as a whole they embody a vast deal of information, important to almost every body.

Vest-Pocket Lexicon, by Jabez Jenkins, is a condensed Dictionary, 2½ by 3 inches, ½ inch thick, containing about 20,000 words, mainly those not familiar to everybody, including scientific and technical terms. The explanations of the words are rather too brief to be fully satisfactory, but on the whole, the book is a convenient *wade-mecum*, easily carried in the vest-pocket. Price, according to style of binding, 53 to 75 cents. sent by mail.

Summer Vines for Verandas and Arbors.—Of those which it is not too late now (June 1st) to plant, and which can be got in small pots at the Florists, we name the following: *Ipomea Learii*—This is a dark, rich blue convolvulus, with flowers larger than the common Morning Glory, growing 15 or 20 feet high. *Cobea Scandens*—Very rapid grower, 15 to 50 feet high, and has large, purplish, bell-shaped blossoms. *Lophospermums*—Two sorts, pink and pale purple, same hight as preceding. *Maurandias*—Three kinds, pink, purple, and white, 10 feet high, very desirable. Great bloomers.

Flowers.—(D. T. of Clinton, N. Y.) The extra fine specimens of Balsams and Asters which you saw at the Fair, were produced in this way: The plants were set 18 inches apart, the side shoots were kept pinched in, and the whole vigor of the plant thrown into a few blooms at the top. The balsam seed used was *several years old*.

Barren Flower Beds.—"Elsie." Yours is not an uncommon case. Your plants having stood so many years in the same ground, have become overgrown, and have nearly exhausted the fertility of the land. The ground is damp, heavy, pasty, and nothing seems to grow naturally in it. Now, give the beds a thorough overhauling. Dig out a part of the old soil and bring in new from the kitchen garden. Then work in a little old manure, and leaf-mold and sand. In setting out the plants afresh, divide the roots and set out only the youngest part of the root. If there are any over-hanging trees, not valuable, down with them; their shade and the action of their roots will spoil any garden.

New Drummond's Phlox.—"Sophy." One of the newest and best is the *Radowitzii*, the flowers being rose colored with white stripes running from center to margin of each petal. It blooms early and profusely, like the old sorts.

Origin of the Delaware Grape.—"W. D." of Morristown, N. J., thinks this a useless inquiry. We beg leave to differ. It is of interest as a matter of intelligence to know the origin of all fine fruits, of all good breeds of cattle, of all useful inventions. The origin of many of our finest fruits was without human intervention. But others have been secured by the skill of man, through planting seeds, and hybridizing. If we knew more of the circumstances attending the origin of chance fruits, it would help us very much in our efforts to originate new varieties.

Mice Gnawed Grape Vines.—(Edw'd Smith.) Laying down grape vines in the Fall was very well, but covering them with straw was not wise, at least for your locality. Next Fall, simply lay upon the canes a few bits of board, or even poles to keep them down close to the ground: of all *coverings* earth is best.

Strawberries—Comparative merits of the staminate and pistillate varieties. "Mrs. E. A. L." The information you desire has been given in past numbers. See basket for May. Any of the varieties indicated there are good enough for field culture. The Wilson's Albany, a staminate, bears more abundantly than any pistillate we have ever tried, but with us the plants are not so enduring as some others; and the fruit, though large and fine, is too acid for our liking. We prefer a little less of the fruit of the Triomphe de Gand, while the plants of this latter do well with us.

Unfruitful Gooseberries.—S. T. Wheeler, Kosciusko Co., Ind. Prune freely in the Fall, cutting out old wood and shortening in the new. An old bush may be cut back one half to advantage. If still inclined to wood without fruiting, pinch in the summer growth.

Training Blackberries and Gooseberries.—"W. K." Beaufort, S. C. The New-Rochelle blackberry should be set in rows about eight feet apart, and four feet in the row. It may be trained to wires on posts or tied to stakes. It should be shortened in at the top and about a third taken from the side branches. Gooseberries should be thinned.

Grafting the Hickory Nut.—W. Minton, Morris Co., N. J. The shagbark can easily be grafted upon the common pig nut, early in Spring, and it is stated also, and we know no reason to discredit it, that whip grafting succeeds with green shoots while growing vigorously, say in July or August, shading the grafts.

Gas tar on Apple Trees.—D. P. Judson, of Fairfield Co., Conn., having 50 very thrifty 4-year-old apple trees, painted them with a coat of coal tar to prevent girdling by mice, as recommended in an agricultural paper. In the course of the Summer suckers were thrown up most abundantly and a swelling of the bark above the tar was noticed as if a powerful stricture had been applied. The tar was at once removed, but its effects were long visible. In the case of one tree the bark drew off nearly all around.

Crown Grafting.—J. D. Douglas, of New London Co., Conn., says he much prefers crown grafting—that is, inserting the cions between the bark and wood—to any other method. He has practiced it for 15 years with entire success, using only a fine saw, sharp knife, and a steel probe to part the bark from the wood. He thinks cions are more likely to grow, and the wounds to heal sooner. Mr. D. uses cement made of 4 lbs. rosin, 1 lb. beeswax, and ½ pint linseed oil, melted together.

Honey Locust Seed.—C. E. Wood. This seed is covered with a thick tough skin and sprouts sooner for scalding, but grows without. Most seeds of evergreens sprout readily, but need a screen or shade for the first season after they come up. Nurserymen plant them in open cold frames and shelter them with a lattice frame made of laths, which diminishes the sunlight.

Weeping Willows.—"J. G. I." Try a "cutting," as large as your arm or no larger than a goose quill—10 feet long or 10 inches; set it in any soil but a blowing sand, a moist loam is best, and it will strike at almost any season of the year when the frost is out of the ground, though early Spring is the best time.

Grasses for Minnesota.—"J. G." of Rosemount, wishes to know the best kinds for that State. Probably the varieties that flourish at the North generally would do equally well there. Herdsgrass or Timothy is one of the best for hay, but does not last long in pasture. White and red clover, red top and furze, fowl meadow, and Kentucky blue grass make good pasture. A variety is better than any one kind. The only cultivation grass needs is the sowing of seed, when the land is laid down with spring grain. Top dressings are of service when the yield begins to diminish; no kind of manure comes amiss.

Alfalfa.—"L. B." of New Russia, N. Y. Lucerne is called by this name in Buenos Ayres. In some respects it is better than red clover. It sends its roots deeper into the subsoil and for this reason withstands drouth better. It grows very quick after it is cut, yielding several crops in a season, in soil adapted to it. It does not succeed well in thin soils, or in those of a compact subsoil. It is not much raised at the north and experiments are needed to show if it will flourish. We advise no one in the latitude of our correspondent to attempt it, except as an experiment.

Prairie Grass for Hay.—"A. D. C." of Ind., wishes to know if this hay is merchantable. Any thing that has value will sell. Whether it will pay to send this hay to market, depends upon his location. In some places it will not pay to market corn. If the hay makes good fodder where it is grown, it will be good fodder, and command some price in any market.

A Package of Oats—The White Poland.—Mr. J. V. M. Wyckoff, of Somerset Co., N. J., informs us that four years ago he received through the Seed Distribution of the *American Agriculturist*, one of the ounce parcels of White Poland Oats. These he sowed in drills in a blackberry garden. The hens destroyed about half of the yield; the rest was sown in a field the next season and yielded 24 quarts. These yielded 20 bushels the next year, which were scattered through the neighborhood and yielded largely. The present great (very bushel that could be obtained was in great demand for seed, at a much higher price per bushel than any other kind. Thirty pounds are reckoned as a bushel, but they weigh fully 80 lbs. to the sack of 2½ bushels. They continue to yield well and weigh heavy, and Mr. Wyckoff says they are esteemed a very great improvement. So much for the history of a single free parcel of seeds—a similar history belongs to tens of thousands of parcels of different kinds of seeds sent free from the *Agriculturist* office, to every part of the land, during a few years past.

Large Yield of Wheat.—J. W. Joseph, Portage Co., Wis., writes that he sowed 1¾ quarts of Golden Trape wheat, on a piece of land 10 rods long and 11 feet wide, from which he harvested 2 bushels and 12 quarts of fine wheat. A very large yield, being 'at the rate' of 57 bushels per acre.—What is its quality, and season?

Cabbages—Corn for Soiling.—"S. W. R." Perrymansville, Md., writes us, that, in his experience, cabbages produce more feed than Rutabagas, sugar beets or carrots, with less trouble to raise, less to prepare for the cattle, and making quite as much and as good milk. On this matter we are willing he should speak for himself. He also writes, that corn, sown broadcast and cut green, produces more soiling feed to the acre, than oats, barley, wheat or southern peas (which lids cattle will not eat) and whatever is left in the field is excellent for winter feed, if cut and cured seasonably, all which is true. The value of the corn plant can not be overstated.

Beans in a Rotation.—They come in properly before wheat. They of course make some draft upon the soil, but not so great as a grain crop.

Sugar Beet Culture in Ohio.—Prof. F. A. Mott, of Columbus, O., succeeded in manufacturing a fair sugar from the beet, and estimates that 16 tons of beets can be raised upon an acre, capable of producing 6,000 lbs. of sugar, and 600 gallons of syrup. Calling the syrup worth 40c. per gallon, and the sugar 6c. per lb., the product is $600 per acre. Prof. Mott plants 10 acres this spring, with seed imported from France. The above we gather from the report of Secretary Kippart of the Ohio State Board of Agriculture.

Syrup from Sugar Beets.—"P. H." of Brighton, Michigan, wishes to know the process of making syrup from beets. There is no simple and cheap process adapted to the farm; a large factory is required for working profitably. It is much better to get syrup from the sorghum which is easily raised on new lands.

Large Increase of Potatoes.—W. Beckwith, Johnson Co., Kansas, says he cut one bushel of Black Mercer potatoes into pieces of two eyes each, planted them on ¾ acre of poor soil, and harvested 90 bushels large potatoes. [Rather thin seeding—only 1½ bushels of potatoes to the acre?—Ed.]

Mixing Potatoes.—We can get new varieties of potatoes only from the seed. The tubers of different varieties will not change, even if planted together

Draining keeps the Land Moist.—"S. K." of Dayton, O., wishes to know how this is effected. The soil is made more porous by drains. The air from the surface follows the water as it sinks into the drains, and diffuses itself through the soil, parting with its moisture as it comes in contact with the cooler particles of soil. As the air is constantly changing, the soil is always receiving moisture in the dryest time.

Canada Thistles.—This plant is propogated partly by seed, and partly by the spreading roots. The perpendicular root is not the true root: *that* is a horizontal stem shooting out, right and left, from the base of the perpendicular stem, a foot or more below the surface. But if this upright stem be perseveringly cut off at the top of the ground, the whole root will gradually die out. The wonder is often expressed, that the uncounted millions of seeds grown each year do not spread this pest faster than they do. They would do so, if a multitude of the seeds were not aborted, and still others were not destroyed by a grub which eats into the flower at its base. A merciful Providence, surely.

Seeds in the Manure Heap will be destroyed if the fermentation is complete in all parts of the heap, and continues long enough. But this seldom happens. If the weeds are dry, it is a much safer process to burn them. If green they will help the fermentation of the heap and perish.

The Italian Bee.—Urgent calls are made for information upon this insect, by "T. B. W." and many others. All who have them to sell, mixed, or pure, of course, affirm their great superiority. But Jonathan remembers that this is an age of humbugs, and waits other testimony. He shall have it in due time. Those who are best prepared to give an opinion would not like to publish it yet. It is thought by some of these gentlemen that this bee will make twenty five per cent more honey than the common variety. The Italian bee has not yet been long enough upon trial in this country to ascertain this fact, if it be one. As the pomologists would say, it is on the list promising well. We will hope for good things from it. So far the main effort has been to multiply queens.

Peach Tree Borer.—"T. B. R." Henry Co., Ind., says: "I have tried planting tansy around my trees, for two years past, and not a single tree has been attacked by the borer, while those without tansy have almost all been more or less injured. I have seen it tried four years on other trees with entire success. The tansy is planted very close to the tree, and so as to surround it. It need not be allowed to spread but a few inches from the tree."—Strong scented herbs are offensive to most in-

sects. Fruit growers have much to learn and to gain in studying their instincts, but it is said that after a while they get used to tansy, and worse things.

Centipedes.—The worms sent us from Baldwinsville, by "L. S. P." are centipedes. He states that they are very abundant in the gardens in that region, destroying strawberry plants, pink roots, tomatoes and even potatoes and apples. One of the best remedies for insects is an application of coarse salt at the rate of about six bushels to the acre. We have also had occasion to notice that insects disappear from the ground that is highly manured and deeply worked. We suggest trenching, spade and manure.

The Cut Worm in Corn Ground.—"J. T. R.," of New-Guilford, Pa., recommends cider bushes one or two feet long, scattered over the field, a rod and a half apart when the corn comes up. The worms seek shelter under the bushes, and are attacked by ants and killed. He has seen half a pint of worms under a single bush. The remedy is easily tried.

Bottle the Insects.—Dr. W. S. Kimball, of Monmouth Co., N. J., informs us that many farmers in his vicinity, have adopted the plan frequently recommended in the *Agriculturist*, of suspending a large number of open bottles of sweetened water in their fruit trees, by which means they entrap an abundance of insects of various kinds. They find their fruit much fairer and freer from worms since trying this method. The bottles have to be emptied and refilled occasionally.

Destroy the Millers.—A New-Jersey farmer writes that he has very much improved the appearance and healthfulness of his fruit trees, besides saving good crops of fruit, by making a blaze among the trees in the evening. He noticed that the millers were plenty early in the Summer, and again towards Autumn, and he only kept the torches burning at those periods, say one week at each season. When first lighted, hundreds of millers were attracted to the flame and destroyed during a single evening, and as each miller is the parent of hundreds, it is easy to see the advantages of such wholesale slaughter.

Pear Slugs Destroyed by dusting with fine dry Earth.—H. E. Davis, Allegany Co., Pa., says his young pear and quince trees were badly infested with the slug which made sad havoc with the leaves. He entirely destroyed them by dusting with dry earth, which, adhering to the slimy skin of the insect, caused death. The rose slug can be destroyed in the same way, repeating the dusting frequently. Dry lime or wood ashes is better than sand or dirt.

Peach Borer.—("Novice.") This is one of the greatest enemies of the peach. It assaults the tree just at the surface of the ground, and will kill it, if not exterminated. Attack it without mercy. Take an old table fork, with one prong broken off, and, having drawn away the dirt from around the roots, ferret out the worm from his hiding-place. The exuding gum and the chip dust will show where he is. Dig him out and kill him. Then scrape the collar of the tree clean, and pour on a quart or more of scalding water.

Fleas.—A subscriber, we should not like to tell where he lives, complains of these annoying insects, introduced by pigs sleeping under the barn. The pigs should have been in a sty, with plenty of muck and mud to roll in, when they would have killed the fleas and made heaps of manure. Fleas are the scourge of the slack, slovenly farmers; it is perhaps well that they have something to keep them lively—even fleas. Clean out under the barn, the sheds, the sty, have a place for your dogs (a grave we should say), a place for your hogs, and the nuisance will be speedily abated. Elbow grease at the end of a shovel is much better than lime.

Hen Lice.—"C. C." recommends white-washing the house, and using sassafras roosting poles as a preventive. So do we. The sassafras has a very strong odor

To kill Rose Bugs.—(Mrs. James.)—Some persons succeed by scattering ashes or air-slaked lime on the leaves when wet with dew. But it is hard in this way to reach the vermin on the underside of the leaf. A surer method is to use a garden-syringe with upturned rose, and dose the slugs with whale-oil soap, at the rate of 1 lb. of soap to 8 gallons of water. Four lbs. will make a barrel full. Apply morning or evening. Two or three applications will generally suffice.

To Prevent Hog's Rooting.—A Canadian subscriber wants to know how deep to cut a hog's snout to prevent his rooting. We should say, the *tendon* that lifts the snout must be severed, to make a permanent cure. A wire in the snout, worn as a jewel, is generally a perfect safeguard against this evil. It is less troublesome, and less barbarous. Piggy submits with good grace, not knowing but the jewel is an honor.

Dog Cured of Sucking Eggs.—One way is to cut his tail off close behind his ears; another is told by a correspondent in Cecil Co., Md., and as many a dozen eggs is disposed of by the favorite terrier who hunts eggs as well as rats in the barn, the hint may be valuable. "As I valued the dog highly for many good qualities, and did not like having it killed, I made many inquiries, and neighbors informed me if I would boil an egg and place it hot in the dog's mouth and hold his jaws together until it burned him severely, he would not trouble the hen's nests any more. I tried it—and he has not touched an egg since."

An Egg within an Egg.—This is rather rare, but not unheard of among "fast hens". It indicates good breeding and rather high living. Your egg is a whopper, about seven by ten.

Sick Hens.—"J. R. K." Phenix, R. I., writes of his fowls, that they have a noisy breathing, terminating in a rattling in the throat. The head about the eyes swells. There are discharges from the nostrils at first thin, and in five or six days thick. They sneeze and make a quirring noise.—The disease is the Roup. Roup is caused by the presence of numerous thread worms in the wind-pipe, which are said to be generated in the blood, principally at times when a want of iron is noticed in that fluid. Remedy.—Soak barley in spirits of turpentine, giving a few grains every morning with some pills composed of 1 drachm of sulphate of iron, and 2 tablespoonfuls of flour. Preventive.—Give the hens a clean house and freedom, with green food and meat or insects.

Long Toes in Sheep.—One of the causes is confinement in the yard or sheds during the Winter. They usually wear them off in the pasture during Summer, especially in gravelly rough land.

Hoven in Cattle.—This is occasioned by eating excessively of green succulent food, usually after being kept on hay and dry food. "The gas generated in the stomach swells the animal, and sometimes causes death. The knife should never be resorted to. If a stout rope of straw, as thick as your wrist, be made, and forced into the mouth, and the ends tied behind the horns, it will afford relief. The animal being turned loose in attempting to get rid of the straw raises the neck and head in such a position as to let the gas out. The passing down of a tube by one who understands the anatomy of the throat will also relieve the animal. But the straw seldom fails, and any one can apply it." (So says a subscriber.)

Horse Refusing Hay.—"A Young Farmer," says of his horse ten years old, that he is unable to swallow hay after he has chewed it, while he eats other provender well. He keeps thin though in good spirits.—The eschewing or throwing out of the food from the mouth after mastication, no doubt, arises from the state of the Molar or double teeth. Examine the mouth of the horse, and if the teeth are found sharp and jagged, they must be rasped smooth, with a proper tooth rasp.

How many Pounds of Milk to a Pound of Cheese.—"O. B. P." of Potsdam, N. Y. gives the following account of his experience to determine this question, beginning May 15th, ending Oct. 30th, 1861. All cheese made prior to Sept. 20th, was shipped Nov. 12th, the remainder Nov. 26th. The night's milk was set 3 to 5 inches deep in tub and pans. In the morning it was skimmed, the cream being made into butter (7 pounds to 100 pounds of cheese,) and the morning's milk added. Cheeses made in May required 11 pounds of milk for one pound cured cheese; those made in October 9¾ pounds, the average of the season being 10 pounds. Cheeses made in May required 9 pounds of milk to one pound of green cheese; those made in October 8¾ pounds, the average of the season being 9 pounds. September 30th, he made cheese in the proportion of 8¾ pounds of milk to one pound of cheese when 60 days old, and he estimates the shrinkage on 100 pounds of green cheese made in May at 17 pounds, and that made in October at 7½ pounds, to the 100 lbs. the average shrinkage being 11 lbs. in the 100.

To Expedite Crops.—In certain backward seasons and localities, the corn crop, root crops, and vegetables in the garden, need a little stimulus. For the corn crop, manure may be applied in the hill. Or if the corn is up, and looks yellow and stunted, use at the first hoeing a tablespoonful of guano, or superphosphate, or a handful of plaster and ashes, to a hill, distributing it evenly in the soil. But special reliance must be placed upon the cultivator and hoe. Both in garden and field, the weeds must not be allowed to gain any headway. In the garden, kitchen slops, or other liquid manure may be used, once or twice a week, according to their strength.

Hen Manure on Corn.—"J. R. T." of Otego, wishes to know the best way to use it. It contains a good deal of ammonia, and should not come in contact with wood ashes. It may be mixed with three times its bulk of plaster, and eight or ten times its bulk of muck, peat, or garden mold, and be used in the hill or for a top dressing after the corn is started, a handful to the hill. The compost should lie a few days under cover before it is used. It is very valuable for all field and garden crops.

Lime on "Pound" (Yard) Manure.—A subscriber to the *Agriculturist*, spread his manure last fall on land intended for corn, and then covered the entire field with slaked lime, and asks our view of the operation. The danger was great that through the influence of a mild rain or the natural moisture of the manure the lime would act upon it and disengage the ammonia which it does very readily, and this most valuable ingredient would be lost. A heavy fall of snow might have saved it—or prolonged rains—but we utterly condemn the practice. Lime and unleached ashes should never come in contact with ammoniacal manure.

How much Leached Ashes to the Acre.—"G. B. H." of Galt, C. West, asks this question. There is little danger of using *leached* ashes in excess. It is a manure that lasts longer than most others, showing its effects for a dozen years or more. Ten or fifteen two-horse loads to the acre will make a good dressing.

Rogers & Gest's Fertilizer Overestimated.—We have received the following comunication from Dr. Pugh, Pres. of the Pennsylvania Agricultural College:..... "Certain analyses of manures made in our College Laboratory were published in the May number of the *Agriculturist*, and the selling price and the correct calculated value of each given. One of them, styled "Rogers & Gest's Ammoniated Superphosphate." Though the specimen sent to me as such, proved to be, as the analysis showed, nearly pure Sulphate of Ammonia, the calculated value of which was $75.80 per ton, while the selling price of the manure it purported to be was $45.00. Several persons wrote to ascertain where they could get Rogers & Gest's manure. I candidly told them all against the danger that the specimen which we analyzed was not a correct specimen of that sold as Rogers & Gest's Ammoniated Superphosphate and assured them that they would only be safe in purchasing on a legal guarantee that the manure contained what we found in it, and wrote also to Messrs. Rogers & Gest asking if they could supply us mannre of the standard we had received at $45.00 per tun. They sent me a 10 lb. sample for examination which I found to be a very different article from that first examined as the following analysis shows:

Phosphoric acid soluble in water	4.49 p. ct.	at 12½c. p. lb.	$0.56
Phosphoric acid insoluble "	5.13 " "	4½c. "	.23
Sulphuric acid	21.35 " "	1c. "	.21
Nitrogen	1.43 " "	17c. "	.24
Potash	1.22 " "	4c. "	.04
Calculated value per hundred pounds			$ 1.28
" tun			25.60
Selling price per tun			45.00
Loss per tun to the farmer in its sale			19.00

I am sorry that an error committed somewhere (though not by us) has led to the association of so high a price with so poor a manure. In conclusion the farmer is reminded that the principle upon which these manures are calculated is not dependent upon any theory as to the agricultural value of the elements of manure. The price given to *each element* is simply that at which it can be purchased in the market. When we say that insoluble phosphoric acid, as in bones, is worth 4½ cents per pound, we mean that this is its market price when free from any admixture, as in combination I can only urge upon the farmers the necessity of refusing to purchase any bf the costly fertilizers without a *guarantee* as to what they contain; and finally if American dealers refuse their guaranty it would be better to import manures from England, from whence at least the superphosphates could be bought and sold on legal guarantee in New-York and Philadelphia at prices as low as those we have used in calculating the value of American manures." E. PUGH. *Agricultural College of Penn., May 3d, 1862.*

Home-made Hand Harrow for Root Crops.—A convenient, home-made implement for running between the rows of beets, carrots, turnips, etc., is formed by driving spikes through a plank of any desired width, to be drawn or pushed between the rows. Round up the forward end, attach a handle, and load with weights if needful. Run this implement between the rows weekly and there will be little left for the hand-hoe.

Agricultural Fun.—A waggish friend out West writes us that "the best way to make farmers grow

Madder, is to *poke* 'em with sharp sticks !"—A novel connection between *Phytolacca* and *Rubia*.

Currant Wine.—There is always a market for it in this city. The price depends upon quality. There are men who make a business of disposing of all such products of the farm and garden, who would sell it probably to better advantage than the producer.

Cotton in Caraccas.—Mr. J. E. Willet, an extensive planter of New Granada, assures us that he produced last season 2,500 pounds of cotton of excellent fiber upon two acres of land, at a cost not exceeding $25 for cultivation. The world will furnish cotton somewhere.

Making Wines.—Messrs. Clark, Selden, and others, Onondaga Co., N. Y., wish instruction about making wines. Strawberry, currant, gooseberry and raspberry wines and cordials are made after different recipes, scarcely any two people following the same. They vary from 1 quart pure juice to 3 quarts water; from 1 pound of sugar to the gallon, to 3 or even 4 pounds, and of course the wines vary from very mild wine-like beverages to sweet, strong cordials. A very satisfactory currant wine is made by using half water, half pure juice, with 2 pounds of white sugar to the gallon. After the juice is expressed from fully ripe well mashed fruit, let it come to the air as little as possible, add the water and sugar together, and put it in a *perfectly* cleansed barrel or other large close vessel, the larger the better, in a cool cellar, filling within an inch or two of the bunghole, over which lay a cloth, until the fermentation has nearly passed. Preserve in a keg or demijohn, similarly treated, enough to fill the barrel full, when the fermentation has nearly ceased, at which time (after 1 month) it may be bunged up, leaving only a small vent at the bung. It may be bottled in October, or stand a year or two on the lees.

Preserving Eggs.—C. N. Bement, in an article in the Genesee Farmer, says that eggs for preservation should be removed from the nest daily, and laid down as fresh as possible. A good way is to pack them, small end down, in stone jars, and pour on a strong lime water in which two handfuls of salt to four gallons of the lime-water are dissolved. Keep in a cool, dry situation.

Good Keeping Pumpkins.—We have now (May 15th,) on our Exhibition tables, a large pine apple pumpkin (60 lbs.) raised in Monmouth Co., N. J., last season and presented to us in Autumn by Mr. S. B. Conover, of Washington Market. The pumpkin is perfectly sound, and would apparently keep much longer, but we wish to plant the seeds, as they can not be found at seedstores. A pumpkin of this kind proved excellent when made into pies earlier in the season.

Destroying Moles and Gophers.—J. Kearns, of San Andreas, Cal., rids his grounds of these destructive pests, by sinking tin cans (lard cans 3 to 6 inches square, and 10 inches deep,) below their burrows. Once in they can not get out, and he has taken 6 to 8 at a single haul. It is advisable to put small pieces of turnips or other vegetables in the cans to attract the gophers, and after the can or earthen pot has been sunk even, the run should be cleaned out and a board or stone laid over the top, a little above the track to shut out light, covering the whole with earth. Mr. K. also poisons them by burying in their runs potatoes in which strychnine is inserted.

Squash Bugs, (writes "J. B. S.", Hilsboro' Co., N. H.,) will crawl on cool nights under pieces of board laid upon the ground among the vines, where they may be found and killed in the morning.

Scale on Apple Trees.—W. Gutteridge: Your trees are covered with 'bark lice' or 'scale', as the twig sent abundantly testifies. The trees will be greatly injured if not killed, unless the insects are destroyed. Make a strong soap suds, with 1 pint of soft soap to 2 quarts water; or 1 lb. potash to 1 gallon of water, and wash the affected parts thoroughly in May or June with a scrubbing brush and the liquid. Illustrations and full directions were given in Dec., 1857.

The "Stuyvesant Pear Tree."—This noted tree, 200 years old, standing at the corner of Third Avenue and Thirteenth Street, this City, we found putting forth its blossoms on the 6th of May, or 12 days later than last year.

Agricultural College of Pennsylvania—Change of Name.—This institution was at first chartered as the "Farmers' High School of Pennsylvania." The requisite legal steps having been taken, the Trustees at a meeting on May 6th, changed the name to that of the "Agricultural College of Pennsylvania," the latter name better representing its character and associating it more directly with similar institutions.

Flower Show of the Brooklyn Horticultural Society.—Lovers of flowers enjoy a great treat, once a year, at the Spring show of this flourishing Society. This year the exhibition was very well sustained in the departments of rare and beautiful exotics. Beautiful leaved plants were in profusion from the magnificent *Cyanophyllum*, 8 feet high, with leaves thirty inches long and 10 wide, to the beautiful *Sonerilla*, of which we gave a picture in the last *Agriculturist*. The show of Orchids was excellent; of *Daphne cneorum*, there were some noble plants; and Azaleas in great perfection, made the room glow with their many tints. There was a most instructive show of Ferns, which was particularly rich in those of variegated foliage. There was a Mocha coffee tree in fruit, and Palms in variety: Roses, Pelargoniums, and many very rare and more common green-house plants, with hanging baskets, moss baskets, Wardian cases, etc., made it one of the finest exhibitions we have ever had on this Continent.

Information Wanted About Bees.—"J. W. H." Hartford Co., Conn. Langstroth on the Honey-Bee, is clear and practical in its instructions, (price $1.25.) Quinby's Mysteries of Bee-Beeping, also a good, common sense book, (price $1.) Both should be perused by those studying the nature and habits of the bee, and either will be a safe guide.

Massachusetts Agriculture.—The Annual volume containing the report of the Secretary of the Board of Agriculture, with reports and valuable statistics, is received from the Secretary, Mr. Flint. It contains a very interesting account of the native Mammalia of the State, and their relations to agriculture, from Mr. E. A. Samuels, who has had charge of this department of the State collections, which, including all branches of Natural History, are now under the charge of the Board of Agriculture. The reports of Dr. Loring, chairman of the committee on Cattle breeding and Dairying; of Mr. R. S. Fay, on the protection of sheep and against dogs; and Mr. J. S. Grennell, chairman of the committee on the wastes of the farm, are very valuable contributions to agricultural literature. We can not express too highly our appreciation of the successful efforts of the Mass. Board of Agriculture, and of Mr. Flint, in particular, under whose auspices during the past year not only the volume before us, but the excellent edition of "Harris' Insects," and the "Manual of Agriculture" have been given to the public.

Country Houses.—We have frequent inquiries in regard to plans for building country houses. Our friends who purpose building will do well to consult Cottage Residences and Cottage Grounds, by Downing. (Price $2.) It is full of practical, good hints.

Wool Growing States—Sheep Book.—"What State is best adapted to wool growing?" "A Subscriber" of this City is the inquirer, and to him and others we must say we can not tell. Sheep will do well every where, in every State and Territory in this broad land from the Aroostook to the Sacramento; and from the Gulf to the great Lakes, on the plains of Texas, Kansas and Colorado, wool can be more cheaply produced than anywhere else. Distance from market, is the disadvantage which the producer has to contend against, and the actual profits of wool raising in Vermont, Pennsylvania, Ohio and Michigan, depend so much upon the care the flocks receive, that it is impossible to tell where with a given capital the most money can be made, which in the view of the farmer is the measure of the adaptedness of any district to wool growing. Randal & Youatt on sheep, bound together under the title of "Shepherd's own Book," (price $2.00) is a book to be recommended.

New Book on Grape Culture.—Just as we go to press, C. M. Saxton places upon our table an attractive work on the Garden and Vineyard culture of the Grape, by John Phin. It is very fully illustrated with new engravings, and is intended to supply a great want. We are pleased with it in the main, so far as we have investigated its merits, but of course, before a thorough perusal, must withhold special commendation. In typographical execution, it leaves nothing to be desired in a book of 375 pages and more than 100 engravings, which costs but $1.00. It may be obtained at this office by mail or otherwise.

Prison Life at Richmond.—We have received and perused with great interest, the stirring narrative of Lieut. W. C. Harris, of Baker's California Reg't. who was taken prisoner at Balls Bluff. It appears to have been written in all truth and soberness, and must exalt the patriotism, and warm the sympathies of all who read it. The sketches were written in the famous Tobacco Warehouse, and brought here sewed into the lining of an overcoat. The book is an 8 vo. of 175 pages. Published by G. W. Childs, Philadelphia. Price $1.

Poultry Book.—Fowls are not only very useful and a source of great agricultural profit, but of great beauty, and their intelligent culture is fraught with interest. To poultry fanciers, we can hardly recommend a book more certain to give satisfaction than Bement's American Poulterer's Companion, one of the starred books on our list. Price $1.25.

Chinese Sugar Cane.

The Journal of the Illinois Agricultural Society publishes a prize article on the culture of Sorghum, and its manufacture into syrup and sugar, by E. F. Newberry, from which we extract and condense the following:

The richest soil gives the largest growth of cane, but not the sweetest, and the syrup will rarely grain. Mr. N. found that cane from the post-oak flats, and from the red clay soil near the timber was much superior in richness to that from the black mold of the prairies. Sorghum proved superior to the Imphee, and to keep it pure, it should be planted at least a quarter of a mile distant from broom-corn or "chocolate corn." Seed to be gathered from the earliest patches, should be fully ripe, and only the upper half of each head be planted, as that portion produces the most vigorous canes.

The time of planting varies with the season, but it may safely be put in a week or two before corn. A piece planted the first of March was frozen in for nearly a month, but yielded a good crop of cane, which made a superior quality of light colored syrup. Fall plowing is advisable, repeating it in Spring, and harrowing thoroughly. With abundance of land and scant labor it is better to cultivate in hills 3 feet apart in 4 feet rows. Soak the seed in warm water for 12 to 16 hours and then bury in sacks in the earth until it sprouts. Roll in dry plaster or ashes if it sticks together. Drop 10 to 15 seeds in a place and cover one inch or less. When one inch high, go through with a harrow, having the front tooth removed so that the harrow may go *over* to each row, and follow with the hoe. Continue to harrow, or use the cultivator and tend like Indian Corn, thinning to 5 or 8 stalks per hill when 4 inches high.

Six to ten days before cutting strip off the leaves. This causes the cane to ripen quicker and gives a richer juice. A quick blow with a long wooden knife will strip it rapidly. Do not top the cane until it is fully ripe; then take off the two upper joints with the seed head—and at the same time cut up the cane. There is very little juice in the top of the stalks, and that of poor quality, and incapable of crystalizing.

Cut the cane as soon as the seed is well ripened, and grind as fast as possible. The uncrushed canes may be kept for months if protected from frost by covering or housing, while even a slight freezing, especially before cutting, will give the syrup a bitter, smoky flavor. The grinding mill should be very strong, with two, or better, three rollers—upright if driven by horse power. Let the juice run from the mill through a wire sieve into the barrel or vat. Cook's evaporator is recommended, and a rapid ebullition, using the skimmer, is the best method of clarifying. Boil down three-fourths in the evaporator, and finish in a large shallow oblong pan over a brick or stone arch, into which it is poured through a strainer. Keep up a brisk heat under the finishing pan, until the syrup bubbles like mush, emitting little jets of steam. It is then run into the cooler in a finished state.

To make sugar, reject the upper half of the stalk and boil rapidly, as soon as the juice is pressed out. Pour the thick syrup into large shallow pans or coolers, and stir briskly until cool enough to bear the finger. If it does not begin to grain in a day or two, place in a room heated to 80° or 90°, in open barrels with the lower end bored and plugged in several places. The barrels should stand on blocks so that the plugs can be drawn to let the molasses drain off when the contents have sufficiently granulated.

Important Reports on the Breadth and Condition of the Growing Crops—Reliable Statistics from nearly 200 Counties, Expressing the Opinions of nearly 1000 Farmers.

On page 186 will be found the beginning of an important monthly series of Reports upon the state of the Crops. The Reports this month are limited, but they indicate what is to be done, and how. Owing to the late opening of the Spring, and the lack of requisite time to make up full statistics, not more than half of the reports already provided for are given this month; yet on a single page we have the results of the observations of *nearly One Thousand* persons living in over one hundred and eighty counties, scattered all over the country. Most of those gathering and sending in these reports are intelligent, observing men, who have been designated by Agricultural Societies, Farmers' Clubs, etc., for this special purpose. We feel quite sure that from no other source can so much reliable information be obtained. Next month we shall probably have several hundred reports, but even 200 of them, from different counties, scattered here and there all over the country, and especially in the grain-producing States, will serve as a fair indication of the whole country. We shall still be glad to add to our list competent, reliable men from counties not yet represented.

The reports are very comprehensive, and give in small compass a great amount of statistical information. The numeral **10** is taken for the average, and the comparative surface growing, the condition, etc., expressed in tenths above or below **10**. [See explanations over the reports.] At the end of each column is a general average, obtained by dividing the sum of all the reports under any head, by their number.

SUMMARY FOR THE WHOLE COUNTRY.

A—The Weather averages nearly 9, or a little below the average of other years (10)—taking into account its effects upon winter grain and fruit, and upon general farm operations. The notes accompanying the reports speak of the weather as very backward, retarding spring work, etc., but first-rate for winter grain and fruit.

B—C—Of Winter Wheat, the breadth growing averages fully a tenth more than in 1861, and fully one-third more than the average annual breadth, for a period of several years.

D—The general prospects of Winter Wheat promise one-third above the average yield.

E—F—Spring Wheat.—The surface sown this year averages one-tenth more than last year, and eight-tenths more than the average annual breadth for five years past.

G—The prospects for Spring Wheat are not quite equal to the average of other years.

H—I—K—Indian Corn.—The planting was not far enough advanced on May 10th for those forwarding reports to give full statistics, though many reported the probable number of acres planted and in preparation. These indicate a surface about equal to last year, but a third more than the annual average for five years past. Much fuller statements will appear in the monthly reports hereafter.

L—M—Rye.—Surface sown, nearly the same as last year. Prospects a tenth better than usual.

N—O—Oats.—Surface sown a little above the average, and prospects nearly an average.

P—R—Hay Crop.—Breadth growing and prospects, rather above the average.

S—T—Potatoes.—The surface planted fully an average; prospects rather poorer than usual.

U—V—Fruit.—Reports almost universally good. The average indicates a double crop of apples for the whole country, and a threefold crop of peaches. These are more indefinite estimates than will be furnished next month.

GENERAL AVERAGE.—The general average of all the figures given in our tables, including surface, prospects, etc., is **12.6**, or one-fourth better than the average of other years. This is more favorable than we had anticipated, until we received and compiled the reports and read the notes accompanying them.

A Change—The Michigan Farmer.

The *Michigan Farmer*, hitherto published at Detroit, is now merged into the *American Agriculturist*. Subscribers who have paid in advance for the *Farmer*, will receive the *Agriculturist* for the *full time* paid for. The services of Mr. Doty, recent Editor and Proprietor of the Farmer, are secured for the *Agriculturist*, and his P. O. address is now at this Office. His former patrons will thus continue to receive the benefit of his labors, and in addition, the advantages of the *Agriculturist*, with its larger facilities, and yet at no advance in the annual cost.

The above is the *seventh* Agricultural Journal merged into the *Agriculturist*, during the same number of years. A friend inquires how long, and how far, this absorbing process is to go on? We answer, just so long as publishers of other journals continue to find it to their own interests, and to the interests of their readers, to propose such changes, if on terms we can afford to accept. No proposition has ever been first made by the proprietor of the *Agriculturist*.

Let us here remark, however, that there are some manifest advantages in this merging process—to the readers, if not to the publishers. For example, the Connecticut *Homestead* was a good paper, and so was the *Agriculturist*, as all admit, we believe; but the *Agriculturist* now has the combined, earnest efforts of the editors of both papers, with no addition to the subscription price. The same may be said, in part, of the union of other papers with this. New York is a central point, almost as accessible, and as directly connected with most sections of our country, as their own capital towns. This may, therefore, well be the central point for issuing a leading journal for all parts of the country. The average circulation of 25 out of the 30 agricultural and horticultural journals in this country probably does not reach 3,000 copies. The circulation of the *Agriculturist*, for sometime past, has ranged from **60,000** to **88,000** copies. Is it not better to combine the efforts of twenty men upon *one* such a journal, than to divide them among *twenty* or *thirty* of 3,000 circulation, each requiring all the office machinery, etc., and necessarily requiring the paying of twenty or thirty subscriptions by any one desiring to avail himself of the advantages of the whole? This concentration of effort at one point has one disadvantage, and one only, viz.: that local matters—of Societies, Fairs, etc.—can not *all* receive constant attention. But the local political and news journals will, in a measure, afford facilities for giving local news, while a few leading agricultural and horticultural papers, at principal points, can furnish the required amount of strictly agricultural information of general interest. We hope the time will soon come when every State shall support at least one first class journal, devoted to the great farming interest; and were farmers sufficiently awake to their true interests, this would be done at once, or as soon as the right men could be found to conduct such journals. But for the time being, it seems a waste of effort to try to keep up one or more vigorous, first class agricultural journals for each locality.

Tobacco Cultivation—No. IV.

Tobacco culturists have now plowed the land deep and turned under a liberal supply of barn-yard manure, and for two, three, or four weeks, the ground has lain exposed to the sun and rains. The influence of these has been very important. The soluble ingredients of the manure have become diffused through the mellow earth, inducing decompositions in the soil itself and rendering still more plant food available. The weathering has a similar effect; in fact, the ground has had a good fallowing with all its beneficial effects, so long as it remained in this condition. Weed seeds germinate under the influence of the May rains, and the rawness of the freshly upturned soil is thoroughly cured.

Were we to prepare a piece of land for tobacco, after proceeding as directed in the May *Agriculturist*, according to the amount of manure then plowed in, or incorporated with the surface soil, we would add more or less. A good surface dressing of well rotted stable manure or fine compost, might first be spread, (unless the land were to need harrowing once or twice to kill the weeds,) and directly upon this we would put 10 to 20 bushels of unleached ashes, three to five hundred weight of gypsum and three or four bushels of salt to the acre, (in the absence of barn-yard manure we would use about 200 lbs. of Peruvian guano of the best quality); and it should be immediately plowed under very shallow, but not so as to interfere with lightly harrowing it; which done, it should be rolled and marked out for planting. Set the plants in rows three feet apart and two feet and-a-half to three feet distant in the rows.

At the very first of this month the seed beds should be looked to, and the plants quickened, if at all backward, with guano water or other liquid manure, so as to be ready for transplanting as soon as the 15th. It is hardly worth while to attempt to transplant tobacco earlier than the middle of June. For some ten days or a fortnight after they are set they are peculiarly exposed to the attacks of the grubs and cut-worms, and they are only free from this danger when they have begun to grow very vigorously; this time comes when we have steady *hot* weather. It is a good rule to be ready to transplant on the first rainy day after the 15th of June. Care must be taken in transplanting; the plants being handled much like cabbage plants, and the smallest of them should have three or four leaves as large as a silver dollar. If the sun comes out hot the next day, mow a few swaths in short thick grass, wet it thoroughly, and use it to cover the plants. Cut hay or straw will do, but is not so good. Keeping a good watch of the plants every morning, the cultivator will see at once any one wilted or drooping, and will often find the worm at the root, and he will replace the plant thus destroyed at the earliest possible moment. Move the plants with a ball of earth attached that they may be less put back and that the field may be more even in appearance. After the plants become well rooted the field is tilled regularly, being hoed and weeded like corn, using the horse hoe or cultivator.

Ladies on Horseback.

Learning that our article on Saddle Horses, a few months ago, interested many, and was the occasion of benefiting several invalids, the writer will now present a few hints on female equestrianism. As a mere accomplishment for young ladies, it ranks high. Perhaps in no place do female charms appear more fascinating, than in the saddle. You may think it is the jaunty cap and plume our Belle wears, or her flowing dress, or the fresh color which riding brings into her cheek, and the sparkle it gives her eye; you may say it is the spirited motion of her palfrey, or the contrast between his rugged strength and her delicate beauty. Analyze it as you please, it will yet be confessed, (certainly by every young man open to conviction) that Belle never looks so charming as when on horseback. We have heard of more than one susceptible youth who has lost his peace of mind by witnessing such a sight. Indeed, to old or young, it is very pleasing. And then, if to this sight you add several young ladies and gentlemen in different colored dresses, prancing along the highway together, you make a picture worth looking at.

The healthfulness of this exercise, few will question. It tends to give a young lady an erect posture; it strengthens her arms, chest, limbs; expands the lungs, gives tone to the stomach, and clearness to the brain. If the digestion is impaired, it will restore it much quicker and better than pills or bran-bread. The fine effect it has upon the spirits is enough to recommend it. How much more enlivening it is than rolling luxuriously over a smooth road in a modern, spring-seated, close-covered, velvet-cushioned carriage! Yet, many of our sighing young misses prefer the latter, 'it is so much more refined!' They think their complexions of satin softness and lily whiteness, would suffer from the exposure of horseback riding! Did you but know it, young lady, nine out of ten young gentlemen would be more pleased with you, if your complexion had the healthier tinge that comes from vigorous exercise in the open air. Who has not known or heard of invalids so weak that they had, at first, to be lifted into the saddle, but who, by steadily pursuing horseback riding for a period of weeks and months, have recovered vigorous health? All of us have known invalids with pulmonary affections, who, having tried the prescriptions of doctors of every school in vain, and having traveled to the sunny South to little purpose, have at last resorted to the saddle, and gained therein more advantage than from all things beside. Many a lady needs out-door exercise, but is too feeble to walk a great distance. Mount your horse, then, not your luxurious carriage. Mount your saddle, and you will find your weak back strengthened, your nerves braced, your head-ache dissipated, and every part of your system toned and invigorated. Your horse will do the hard work for you, and yet give you all needful exercise. He will bear you over the hills and far away into the woods, to gather flowers, and see the birds, and if you like, down yonder gorge to see a waterfall, and over the bridge to a certain farm-house to visit some friend, and see her pleasant occupations. Wherever you will, you can ride, and then come home refreshed and inspirited with new health. In England the ladies ride horseback more than in the northern United States. It often forms a part of their education to learn to sit in the saddle gracefully, and to manage a horse with skill. In the southern states of this country, it has long been a very common practice. The writer of these lines has often raced with Virginia lasses, leaping brooks and ditches, and low fences, side by side with them, and he confesses that he generally (gallantly?) came off second best in the contest—as in duty bound. We are happy to know that female equestrianism is becoming, of late, more popular among us. In many of our cities, riding schools have been established, and along our parks and broad thoroughfares, many a gay company of lady-riders can be seen almost any fair day. So too in the country generally, there is an increasing fondness for this exercise. *

Halter Breaking Young Colts.—There is as much advantage in beginning early with a colt as with a boy. It is serious business to most farmers to break a stout four year-old to the halter, and to handling; but begin with a sucking colt, and you have an easy task. He takes gentle handling kindly, may soon be made familiar with the halter, and do your bidding. After a little training, the boys can lead him to the pasture and to water, which will be a good lesson for them, as well as the colt.

Concerning Old Horses.

Not those *very* old hacks, on the shady side of twenty. Not those broken down with hard work, "lame in one leg and blind in one eye." No: we simply mean horses that have got over their youthful follies, and settled down for life into good, honest, staid habits. In age, they may range anywhere between eight and fifteen years; for if they have been properly used, they are not old, in a bad sense, until they have passed this limit. All along through this period, such an animal may be styled our "good old horse," our "safe family horse," and other fond epithets. Who does not like such a beast? Your hair-brained youth, full of daring and lusty strength, may prefer an animal as wild as himself. Horse dealers and fast men may like one that will never allow another to pass him on the road, even though he starts at every strange object in the street—one that prances and paws and chafes under restraint; but sober and sensible men have very different likings. They want a horse that, while he has abundance of spirit, is, at the same time, easily restrained; that does not fret and worry at his work; that carries his rider, or draws his load cheerfully, steadily, vigorously, until his task is done. Your old horse does this. Let him stand idle a day or two, and he will play like a colt. Have a care, or he will dance you out of the saddle. Look sharply, or he will make the old family carriage whirl, and give the ladies a harder jolting than they desire. But ere long he sobers down, and saves his reputation as the "good old horse."

The horse and his master are generally in keeping. The man has sown his wild oats, is married, and has a household to provide for; can't waste his time and strength in exciting follies, and don't wish to expose his family to danger. So he buys him a good old horse, one that can always be relied on, one that has at least $20 worth of *stand-still* in him. Animals like these deserve great respect and consideration. They are the most useful citizens in horse-dom. On them the burdens of life chiefly rest. They manifest a deal of sober dignity, as if conscious of weighty responsibilities. It is painful to see such horses over-driven or overworked in any way. Of course, they are not as quick as they once were, yet they will work over about as much ground in a day as most young horses, if they be allowed to go at their own pace. They should not be over-strained with heavy loads. Give them reasonable burdens, let them move moderately, and they will work faithfully day after day without flinching. Such horses should have some special care in feed and grooming. Adapt the treatment to their

wants, and they will continue useful many years after they would otherwise have been laid aside. A writer in the Ohio Farmer well says that "the last part of a horse's life may be more profitable, if rightly used, than the first part. There is more comfort and less danger in working old horses. We understand them, and they understand us, and we should be as willing to conform to their nature, as they to conform to our wishes. It would be more humane, as well as more profitable, to use them as they should be, as long as it would pay, and then take them out and shoot them down. But the practice of many is to knock them about as much as they will bear and pay well, and then trade them off to some more inhuman wretch than themselves."

Cost of Keeping a Horse.

In the March *Agriculturist* a request was made for information on this subject, and we have received several responses which are interesting and instructive. W. M. W. of Middlesex Co., N. J., reports the expense of keeping one horse (worth $130,) for 1860 and 1861, as follows:

1860.

23½ bushels of corn at 72½c. per bushel	$17.04
33½ bushels of oats at 37c. per bushel	12.47
3631 pounds of hay at $15.14 per ton	44.24
Shoeing,	2.54
Total cost for one year	$76.29

1861.

15 bushels of corn at 60½c. per bushel	$9.06
26½ bushels of oats at 32c. per bushel	11.79
3500 pounds of hay at $13.33 per ton	36.68
Shoeing	2.45
Total cost for one year	$59.98

R. G. of Warren Co., N. Y., reports as follows: I have kept horses for the last 40 years, and find that the expense varies much according to the use, or labor required from them. A horse can be kept in ordinary order for doing light work, and nothing more, on the following:

1st 6 months—2 tuns of hay at $6 per tun	$12.00
" 45 bushels oats at 50c. per bushel	22.50
2d 6 months—1 tun hay	6.00
" 12 weeks pasturing at 25c. per week	3.00
" 45 bushels oats at 50c. per bushel	22.50
Shoeing for the year, $6; Grooming, $6	12.00
Depreciation 10 per cent., and interest 7 per cent	17.00
Total cost per horse for one year	$95.00

Samuel Simpson, New-Haven Co., Conn., writes: "I have kept from one to three horses the past 26 years, part of the time owning land, and raising their feed; but will give a statement of the expenses for two horses kept from May 1856 to May 1861, five years, during which time I bought all their feed. They consumed about

5 tuns of hay annually, at $15 per tun	$75.00
200 bushels of oats at 50c. per bushel	100.00
1 tun of straw for litter	6.00
Shoeing	10.00
Add interest on $300	18.00
Total	$211.00
Sold the manure annually for	20.00
Net cost of the pair per year	$191.00
Net cost of keeping a single horse per year	95.50

During the whole 26 years I have never had a horse die, and in a majority of cases have received more than I originally paid, when I disposed of them. As a general thing I have driven my horses myself, and have been careful to see that they were well taken care of."

These accounts and estimates show very nearly the cost of horse keeping, at the different prices of provender specified. It is proper to add the interest on the cost of the horse, and the depreciation, where these items are omitted. Ten per cent will not more than cover the risk, and depreciation, taking the average. It would have added to the interest of these statements, if the weight of the horses had been named. It usually costs more to keep a heavy horse than a light one, and for many purposes the light horse is the better animal. This item of economy is generally neglected, but worth looking after.

Unruly Milch Cows.

It is no wonder that some cows are fractious, they are treated so roughly. Why kick, pound, and bawl at them? It only makes matters worse. It makes the timid ones shyer, and the spirited ones ill-natured. We urge kindness not only as a matter of humanity but of profit and patriotism—aye, profit to your heart, profit to your pocket, profit to your country. It is vain to try and whip or frighten a cow into quietness and docility. So treated, she dreads and hates to see the milk pail and stool coming, and will prepare herself for a battle. How can she stand patiently and give down her milk, while expecting to receive hard thumps?

Suppose her to be treated kindly—a little salt or some other relish given to her a few times, kind and soothing words spoken, and a little caressing made with the hand. If somewhat restless at first, keep your temper, and follow her up with daily kindness. The result will surely come. She will soon know what to expect from her milker, and will show her likings by unmistakable signs. No person who can not control his passions, and speak low, and be always gentle, should be allowed to milk a cow. It is of importance, too, to milk at regular hours. There should seldom be a change of milkers.

A successful dairyman once observed to an agricultural editor, that one of the secrets of his success lay in the kind treatment he gave his cows. They were driven to and from the watering place, leisurely. No dogs were allowed to distress them. No hired man was suffered to beat or to scold at them; whoever did so, was discharged at once. The cows were well fed, and allowed to take their own time in all their movements, especially in warm weather. Being so treated, and milked regularly and clean, he believed that from fifty to a hundred more pounds of cheese could be made per season from each cow, than if they had been kicked and frightened, and otherwise roughly handled. *

Diseases of Calves—Scours.

At this season, the most common and often fatal disease of young animals—colts and lambs as well as calves—is the "scours" or diarrhœa. It manifests itself in two forms, the white, and the yellow. The white scour, as the white is generally called, is caused by indigestion and the decomposition of milk in the stomach; the yellows, by an excessive flow of bile. A heavy damp state of atmosphere is particularly conducive to the generation of this disease. In localities where the land is either low, wet, or badly drained, or subject to be flooded, the attacks are always characterized by greater severity. Some particular grasses, the changing of the pasturage of the mother from a dry upland to either young clover or to low meadows, the removing of the calf from the care of the mother to a strange cow, feeding the calf on stale scalded milk after the cream has been taken from it, without adding a corrective substitute for the essential principles so abstracted, all exercise an injurious influence on the health of the calf by causing relaxation of the bowels or scouring, which, if suffered to continue unchecked, will inevitably result in the loss of the animal; nor is exposure of young calves, and other animals, to wet or cold weather less fatal in consequences.

The disease, if taken in time, is not of itself dangerous—death, in most cases, resulting from the extremely emaciated condition to which the system of the animal is reduced for the want of proper care, in due time. "An ounce of prevention is worth a pound of cure;" therefore, the rearers of young stock should provide good, *dry* pens for their calves, especially those intended for the butcher, and, with respect to those set apart for rearing, they should, whenever the weather will permit, be turned out during the day into a well shaded pasture, taking particular care to house them *early*—before the dew falls.

The treatment of this disease, in its early stages, as a rule, is confined to very simple remedies; *first*, administer ½ oz. of Epsom salts with a very small quantity of ground ginger, dissolved in a little fine flour gruel; by this means the stomach and intestines are cleared of all foreign or acrid matter. After allowing time for the medicine to operate, (8 to 10 hours,) give the following: Prepared chalk, 1 oz.; extract catecheu 2 drachms; opium powder, 1 drachm; peppermint water ½ pint; one tablespoonful three times a day. It will rarely be necessary to continue the use of this mixture for more than two or three days. In cases of great prostration and debility, tonics and stimulants should be given without delay; in such instances give: tincture gentian, 1 oz.; essence of ginger, ½ ounce; peppermint water, 4 ounces; one tablespoonful twice a day. During the time that the cases are under treatment, good, well boiled wheat flour gruel should be given twice a day. This will also often check incipient diarrhœa without the use of other medicines. *

A "Commentary" on Roots.

By Timothy Bunker Esq., Hookertown, Conn.

"I should like to know what upon airth you dew to your cattle to make 'em look so slick?" said Jake Frink as he looked into my yard on a bright April morning.

"Dew to 'em, you fool," exclaimed Tucker, "he stuffs 'em with ile meal, and corn, just as you would a sassage."

"I'm mighty glad I don't have the bills to pay," said Jones. "That animal has cost fifty dollars this winter, I'll bet a shad; and 'twouldn't sell for that neow." "Don't be so sure of that," said Seth Twiggs, as he joined the company at the gate, and looked admiringly at Cherry, who had dropped her third calf a few days before. "I am in want of a new milch cow, and will take her at that price without the calf."

"You will have to add ten more to get her, I guess, even if I want to sell," I remarked very quietly, as I showed a pail half full of milk after the calf had taken all he wanted to suck. "But you see I never sell a new milch cow. Making butter and cheese is my business, and milk is my stock in trade. A shoemaker might as well sell his leather, or a tanner his hides, as a farmer sell a new milch cow. The dairy farmer, who has his eye teeth cut, will sell cows only when they are well fattened, or at the close of the milking season."

"But s'pose he has mor'n he wants," said Seth inquiringly, as he loaded his pipe.

"He has no business to be in that fix," I replied. He raises a given quantity of hay, and rough fodder, corn stalks, straw, pumpkins, roots, etc., and he ought to know just how much it will take to bring them out in good condition in the Spring. If he has only fodder enough for twenty head of cattle, he makes a great mistake if he keeps twenty one, and is foolish if he attempts to keep five and twenty. With food enough, he will make a profit on each; with too little, he will loose on every one."

"'Loose *every one*,' you ought to have said,"

interposed Seth, with a knowing wink at Jake Frink for his recent experience with the horn-all.

"Cherry," I continued, "is what I call a living *commentary on roots*. Mr. Spooner has a good deal to say about the opinions of different commentators on this and that text from which he preaches. I always thought that the best commentary on a man's faith, was his *practice*. His life shows well enough what sort of food his mind lives on, and it is pretty much so with fodder. There's a good deal of truth in the old adage 'The proof of the pudding is in the eating.' The kind of pudding my Cherry has lived on all Winter is turnips, sugar beets, and good hay. Not an ounce of meal upon the honor of a gentleman, and she gave milk until within two months of her calving. You see, now, she is as sleek as a mole, with a bag as big as a milk pail, and a fine calf."

I put the ease to my neighbors, Mr. Editor, in that way, and made them see it. I know a good many farmers say roots don't pay for raising, that they are all water when not frozen; and if they are frozen, you might as well feed your cattle on snow banks. I know that the chemists say that they are more than three-fourths water, and not worth half as much as hay, which may be true enough. But what do I care for these opinions, so long as roots make flesh and milk cheaper than any thing else I can raise. I am after milk and flesh by the cheapest method, and if giving water to the stock will bring them, I shall give them water—Jake Frink, and Mr. Retort to the contrary notwithstanding.

White turnips stand particularly low in the scale of nonrishment, and yet Cherry had white turnips, a half bnshel a day, until they were all gone, and gained flesh upon them. She did better on sugar beets; and for that reason, I think they are worth more, and if they could be raised as cheaply as turnips, I should prefer to raise them. But I do not see how they can be. I can raise turnips among corn, as a stolen crop, for four cents a bnshel, and I think all roots that require a whole season—beets, carrots and parsneps—will cost not far from ten cts. a bushel.

My rule is to raise all the roots I can, of the several varieties, so that every animal may have a daily feed of them from November until May. They like a variety of food, and with hay as a staple, I think the greater variety the better, feeding say two weeks upon one kind, then taking another two weeks. Many think they can get more fodder from an acre of land in grass or in corn, than in roots. Not so:—An acre of land has to be highly manured to produce seventy bushels of shelled corn, and four tuns of dry stalks—worth at the market price not far from a hundred dollars, which is perhaps a fair expression of their value for feeding. The same acre, with rather more labor, will produce 1000 bnshels of carrots worth from two to three hnndred dollars in different markets, just as their value is known and appreciated. I have raised all the roots usually cultivated for feeding, and I come to the bottom of the root bins every Spring with a stronger conviction of their value. *The living commentaries* tell the story a great deal better than I can, and some of my neighbors have got the lesson. Deacon Smith learned it before I did. Mr. Spooner got hold of it early, and he always drives a fat horse, that goes round the parish preaching carrots, wherever he calls, just as plainly as Mr. Spooner preaches election in the pulpit. Now I have nothing agin Mr. Spooner in the world, and I don't mean any reflection on him when I say that the old horse has more "unction" in his preaching than any thing we have in the Hookertown meeting-house on Sundays. There hasn't been a rib in sight since he has owned him, and when he drives up to the door on Sunday morning the horse comes up with a praneing gait, and a coltish air, that says "carrots," as plain as if Mr. Spooner had a bag of them under his carriage seat. I don't talk such things Sundays, but you know a man can't help thinking.

And there is Seth Twiggs, whose brains one might think were all smoked out, has got ideas straight as a ramrod on roots, and raises heaps of them every year, though he has but a few acres of land. Even Jake Frink is waked up by the preaching of Mr. Spooner's horse, though he never hears the man—except at funerals. He goes in for a crop of sugar beets this season, for the first time. Tucker and Jones are not yet converted, but I am expecting even they will be brought in before long.

One of the advantages of the root crop is, that it may be put in late. Rutabagas and carrots may be sown without any detriment any time in the month of June; white turnips a month later, and the first week of June will do very well for sugar beets and mangel wurzels. This last is the most productive of all the roots, and but little inferior to the sugar beet in quality. The "commentaries" on roots are multiplying here.

For the American Agriculturist.

Rocky Mountain Farming.

BY A COLORADO FARMER.

Our climate here is generally the most delightful I have ever experienced. Our rains are periodical and of short dnration, say abont four weeks, commencing the last of June and ending the last of July. In the mountains the rainy season is longer. The atmosphere is light and dry, the nights cool, the days warm. During the Summer of 1860, we had no warm nights—all cool enough to bear a good comforter—but the Summer of 1861 had all comfortably warm nights. The former year developed no mosquitoes—the latter produced multitudes. Last season we had but little frost in April or May, none to hurt lettuce, radishes, and hardy vegetables. But little snow falls in the valleys dnring Winter, and we have but few days of severe weather. The cold snaps usually come from January 1 to 15, but sometimes either earlier or later. September, October, November, and December, except a few days, are pleasant beyond any thing I ever experienced elsewhere. Our warm weather in Winter does not produce lassitude; the atmosphere is clear and bracing. Except on the highest, or Snowy Range, little snow falls in the mountains, where the most of the quartz mills are running, and that little does not lie long, except where drifted in valleys. The changes from hot to cold are not greater than I have always experienced in the North, East, and South. Vegetables have been drawn into the mountains all Winter so far; at no time has the grass been covered by the snow. Our cattle have been unhoused and are fattening finely. This Winter is milder than last—about like that of '59 and '60, and a fair average of the winters in this climate.

Severe and killing frost comes September 14 to 17, uniformly—in three Falls it has not varied from these dates; then follows the most beautiful fall weather I ever saw. Certain warning is given to secure all perishable products, and ample time to save fall crops. We have an occasional hail storm; severe blows, with cloudless skies, and sudden changes of weather; we have dry roads all the year—the best natural roads the world ever saw—and general freedom from colds. With proper care this is certainly a healthy climate. But we have yet no system, no care, and few of the comforts of our former homes. As the country improves the little sickness we have will greatly diminish; and I am satisfied our mineral springs, mountain ranches, and country seats, will be the resort of invalids of other climes. Exposure and neglect, with improper diet produce scurvy, fever and rheumatism, with an unusual amount of erysipelas; all which yield readily to proper treatment. Among the prominent causes of diseases may be counted the universal and immoderate use of soda in cooking. Yeast bread must remain a scarcity until the supply of women is increased.

Soil.—Our valley soil is composed of sand, ashes, and decomposed vegetable matter. Most of the tillable land lies in the creek valleys, though there is much of the high lands on the divides, [elevated land between the creeks or "forks,"] which can be made highly productive by the application of water; these uplands have more clay, less sand and decomposed mountain vegetable matter. What we call willow land on the bottoms is very rich and productive—yielding 200 to 400 bushels of potatoes per acre. The soils in the valleys vary from 6 inches to 4 feet in depth, the whole being regulated by the irregular action of the streams in changing their channels in past ages. The bottoms of these are uniformly covered with bowlders and sand. The mountains yield an annual supply of ashes from the burnt districts, which can be rendered useful by irrigation. Our larger valleys, further from the mountains—such as the Platte—have fewer bowlders, and more rich tillable land. When our lands are brought fully into use we shall be able to support a large mining population, and raise nearly every thing we want.

Capacity of Soil and Climate.—Wheat, rye, oats, barley, corn (early varieties), vines (cucurbitous) of all kinds; roots of all kinds; in short, nearly every thing produced for the New-York market can be raised here in great perfection. Sorghum and Imphee cane have both been successfully produced. Sugar beets would attain prodigious size. I have raised Kidney potatoes weighing 1¼ and 2 pounds; other varieties grow much larger than in the States. Cabbages 20 and 24 lbs.; pumpkins and squashes enormous, and finely flavored—say 60 to 100 lbs., and fine grained, splendid for table use. Beets, turnips, 8 and 12 lbs. Wheat 35 bushels per acre without irrigation—will probably reach 50 with proper culture. Flat turnips and rutabagas, yield immensely. Hungarian grass also does well. These items will give your readers an idea of what the natural soil will do. The results of manuring, this deponent will not calculate. Potatoes, onions, turnips, and kindred plants, come to perfection even in the mountains.

Fruits.—I fear we shall not be able to raise fruits. Our warm days and cool nights, Spring, Fall, and Winter, will render all tender fruits uncertain, provided there be no other difficulty; the shortness of our seasons will enhance the obstacles. A few fruit trees are planted in this vicinity. On the Arkansas, which rises in the mountains, my brother has started a fine peach orchard which will soon test the southern part of our Territory, and as soon as may be, I shall test this section. Time will likely point out favorable spots, on north hill-sides, and at the base of the mountains—perhaps in the Canons (kan-yons)—where fruits may be successfully grown.

JOHN B. WOLFF.

Fig. 1.

How the Sap Circulates in the Trunks of Trees.

In the town of Yonkers in this State, a few years since (in 1855), after a severe winter, the bark of some six or eight trees in a young orchard was found split down perpendicularly. The trees were not properly attended to, by binding the bark to the trunks and closing the cracks with cement of some kind. In the course of the summer they all died but one. This tree lived and flourished; the bark, however, separated from the trunk and formed a roll upon one side, being attached to the sound parts of the tree above, and to the root below. Fig. 1, represents the appearance of the tree at this period. The edges of the bark grew together and wood was deposited on the interior of the roll. The second year it flourished, the bark trunk becoming firm and woody, and the third year it fruited, the naked trunk decaying rapidly, so that it was necessary to support the top artificially. Finally the old trunk decayed altogether, and the tree, when we last heard of it, presented the appearance shown in fig. 2. In this interesting case we have a demonstration of the received doctrine in regard to the functions of the wood and bark. The injury to the tree having taken place in the winter, the sap wood through which the sap rises in the spring was still capable of performing its functions. The sap ascended through the naked trunk, was elaborated in the leaves, and returning, it passed down the inner film of the bark, depositing the new inner bark and young wood within the bark roll, much as if nothing had happened. By the time that the action of the weather had dried and unfitted the old trunk for a sap channel, there was a new channel already formed within the bark, showing most conclusively that the new wood is a deposite from the bark and independent of the old wood.

Fig. 2.

PEELING APPLE TREE TRUNKS.

There is a practice, precisely the reverse of this, sometimes employed to give old apple trees new bark. It depends upon the fact that when the new bark and the new wood are first formed, they are easily separated from the bark, by which they are deposited, but adhere more firmly to the wood. If about the 20th of June the bark be removed from an apple tree without injuring the trunk (which will appear entirely naked, but is in fact covered with a delicate tissue, conducting the sap as it descends,) a new smooth bark will rapidly form. The time at which this is performed is very important, as a few days too soon or too late makes the operation a fatal one to the tree. We have known trunks of trees which were called hide-bound, or bark-bound, the bark of which was full of insects and covered with moss, thoroughly cleaned, and by this process clothed anew with the smoothest most beautiful bark we ever saw. The general health and condition of the tree was greatly improved, so that they responded to manuring and became again fruitful. We can not, however, recommend the practice, as it seems hazardous and may be so in reality. *

The Buffalo Tree-Hopper the Cause of Scars on the Twigs of Fruit Trees.

By Asa Fitch, M. D., Entomologist to the N. Y. State Agricultural Society.

To the Editor of the American Agriculturist.

From the cuttings of cherry twigs which you sent me, and from information which I previously possessed, I draw up the following account of a malady in the twigs of fruit trees, of which no published notice has hitherto appeared, that I am aware. In Winter or Spring a peculiar kind of crack or scar is sometimes observed on the twigs of apple, cherry and other trees. It extends lengthwise of the twig and is from ¼ inch to 2½ inches long. It occurs on twigs that are nearly or quite ¼ inch in thickness, and two or more of these scars are frequently seen along the same twig. Their surface is slightly elevated above the level of the bark, has a rough, cankered appearance, and shows a deep crack along its middle, in which crack a row of small holes is more or less distinctly to be seen, extending the whole length of the scar. On splitting the twig it is seen that these holes are bored down into and almost through the soft pith in its center, in a slanting direction, and that each hole is somewhat bent or curved and is occupied by the egg of an insect. The eggs are shining, yellowish white, cylindrical with rounded ends, and four times as long as thick—their length being a little more than the tenth of an inch, and exactly filling the holes for about two thirds of their length. In a scar 2½ inches long I count 55 eggs. And now, what insect is it that makes these wounds?

Buffalo Tree-Hopper.

Some years ago I found willow twigs in my own vicinity wounded in this manner, but the holes in the scars were empty, the insects having hatched and left them. In the Spring of 1858, the twigs of apple trees at Akron, O., were very much injured in some orchards by wounds of the same kind. The malady excited the attention of H. W. Howe, Counsellor at Law, of that place, who sent me specimens of the wounded twigs, and some correspondence thereupon followed between us. On learning how much of a novelty these wounds were, and that the insect making them was unknown, he devoted particular attention to this subject, and at length was so fortunate as to detect the culprit in the very act of piercing these holes, and specimens of it were thereupon sent to me. It is thus to Squire Howe that we are indebted for knowing what insect it is which causes these wounds and the manner in which it makes them; and in justice to him I ought, ere this time, to have made his interesting discovery known to the public. This insect is so common through the northern States and Canada, and has such a peculiar form that it has at some time been noticed, probably, by every person who has his eyes open. It begins to be seen soon after the middle of July, and remains until the end of the season. It is from three to four tenths of an inch long, of a light grass green color, freckled rather faintly with whitish dots, and is *shaped like a beech nut*, with two short sharp-pointed processes, like horns, jutting outward in front, one on each side, giving its forward end some resemblance to that of a bull or buffalo. Hence it has received the name of the Buffalo Tree-hopper, or *Ceresa bubalus*, as it was scientifically named originally by Fabricius. It pertains to the Homopterous division of the order *Hemiptera*, and to the family *Membracidæ*. This insect may frequently be seen standing on the small limbs of the apple-tree, the locust, and other trees in our orchards and yards, with its head towards the base of the limb. It remains perfectly motionless and quiescent; but if the finger approaches it, with a sudden strong spring it darts away with such velocity that the eye is seldom able to follow it, or even perceive the direction in which it has thrown itself.

A twig wounded by Buffalo Tree-Hopper.

The piercer, lancet, or ovipositor—the instrument with which the insect perforates the holes in the twigs—closes into its sheath, much as the blade of a pocket knife does into its handle. It is plainly to be seen thus closed in a groove, which is at the hind part of the body on its under side. To perforate a hole, this piercer, as Squire Howe informs me, is held obliquely downward and forward, or like a knife blade a quarter opened. Being in this position and with its point pressed against the bark, it is by a forward movement of its body that the insect draws or thrusts it downward through the bark and soft wood and into the pith. An egg, no doubt, is then passed into the perforation, as the implement is being withdrawn. The wounds which are thus made are scarcely perceptible at first, but become more and more conspicuous with age. It was the last of September when Squire Howe discovered the insect at this work, and some of the wounds then on the twigs he judged from their appearance had been made a month earlier.

The eggs remain in the twigs through the Winter and hatch in the Spring. They do not produce worms, but small active insects which have some resemblance to the parents in their shape, though they are destitute of wings and of the hard shell-like covering which they acquire when they become fully grown. They wander away from the twigs as soon as they are born.

Both the young and the perfect insects nourish themselves by puncturing and sucking the juices of the leaves or of the new tender bark of the twigs. They are thus pernicious to the vegetation on which they occur, as well as by wounding it to insert their eggs. And in seasons when these Tree-hoppers are noticed as being so common as to excite fears of injury to our fruit

trees from them, it may be well to occasionally shake or jar the trees to frighten off these insects—for I think few of them will remain on trees where they find they are liable to be thus disturbed, but will fly away from them to some of the forest trees, which appear to accommodate them as perfectly as do the fruit trees.

For the American Agriculturist.

Experience in Hoeing Wheat.

A few years past I have been trying some experiments in tilling fall wheat and other winter crops—in the Spring as soon as the ground is in condition to stir, say about the last of April and first of May—with decided beneficial results. When the wheat has been sown in drills, it can be hoed with a pick, or broad hoe, if desired; and if sown broad-cast, the ground may be mellowed up with the pick hoe or a sharp stick. It will not injure the wheat if covered a little with earth when small, nor if some of the roots are broken, any more than it will corn. Wherever I have tried the experiment, the difference in yield was very great, the straw being longer, the grain longer kerneled, and heavier per bushel. Heavy soils want mellowing more than open lively soils, and they will bake in the sun unless loosened up by some hoeing process. Those stools that were injured by the winter are strengthened by the hoeing, and branch out, or "tiller," vigorously, while feeble plants become large and healthy. At the same time, all foul stuff that comes up promiscuously among the grain may be removed, letting in light and heat, and the influence of the atmosphere.

I believe thorough tillage on heavy soils will add 25 to 50 per cent to the crop. The hoeing of wheat by hand in this country is rather slow, and it will not pay very well. I have rigged a cultivator with small teeth, on wheels, to follow between the rows, and by the use of handles can guide the teeth between the rows of wheat, to fit any curve that the drill may have made.

I am not making any of these cultivators, but if any person wishes to try the experiment this season, he is welcome to get one up, and I will give all necessary information. A. B. TRAVIS.

Brandon, Oakland Co., Mich.

OXFORD, Mich., Sept. 21, 1861.

This certifies that in May last Mr. A. B. Travis, of Brandon, cultivated a few rows of wheat in a field of mine [with his wheel cultivator] as an experiment; the rows of wheat were easily traced with accuracy, leaving the ground mellow and clean, and without the least injury to the wheat. At harvest I found [estimated] the cultivated wheat 25 to 30 per cent better than that on either side that had not been cultivated, but otherwise had an equal chance. Another year I shall try the cultivator more extensively, and I confidently recommend it to all wheat growers. DAVID G. DUNLOP.

We were present when Mr. Travis cultivated the wheat for Mr. Dunlop, and assisted in harvesting the same, and cheerfully testify to the correctness of his certificate. (Signed by) HENRY VINTON, M. J. DUNLOP, S. VINTON.

Connecting Links.

Links of the form which we represent are exceedingly convenient if at hand when a chain happens to break, and by their use broken chains may be made serviceable until it is convenient to take them to a blacksmith.

The cut represents an iron wire or rod of any desired size, bent to form a link, with flattened ends, which are spread apart so as to admit the other links which it is intended to join. When the chain is linked, the ends are hammered together, and then it will require a great force to draw them out. Blacksmiths often keep on hand similar links of various sizes, but with ends not lapping so much, for the purpose of mending chains, as they require only welding to make them thoroughly secure. The flattening of the ends is important, as it stiffens them.

Labelling Sheep.

It is very customary, in many parts of the world, to mark flocks of sheep upon the ears, as a badge of ownership. However necessary this practice is in large flocks, when sheep are liable to mix—and it is desirable to detect stray ones with the greatest ease—it is not necessary in small flocks of choice sheep, kept several years on the same farm for breeding; and besides, a mark on the wool answers all purposes of marking these flocks. Mr. H. G. White, of Middlesex County, Massachusetts, practises a very simple and commendable way of labelling and registering each of his breeding sheep, which we illustrate, (fig. 1.) Upon a copper tablet of the size of a dime, which is attached by a split, steel ring to the ear of the animal, (fig. 2,) two numbers are stamped, one that of the individual bearing the label, and the other that of its dam. A record is made at the same time in the flock register. The ring is attached to either ear, a hole being made with a shoe punch. It does not rust materially, causes no soreness, being on the under edge of the ear, and close to the head, it does not catch in bushes, is conspicuous enough, and lasts during the life of the sheep. If it be desirable to use these labels as flock marks, they may be made triangular, oval, square, diamond shaped, oblong, and of many other forms; and even two flocks with the same label might be distinguished by wearing them on the right and left ears respectively. The cost (about 3 cents per head) is very slight, considering that the mark lasts a sheep its life time, gives it a name, preserves a record of the dam, and if you will, of the year of birth.

Fig. 1.

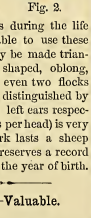


Fig. 2.

Hay and Grain Caps—Valuable.

We have yet to hear of any one who has tried home-made cloth covers for hay and grain, that would willingly give them up, among all the large number who have adopted them on our recommendation. The high price of cotton, this year, will operate against their general use, yet even with the present cost of muslin, we feel quite sure it will pay to make them. Coarse unbleached cotton cloth will answer, and the present price of 14 yards wide is only 15 to 18 cents, according to the quality and thickness. These caps, to throw over hay-cocks, and shocks of grain, often save the hay, grain and straw from rain and dew, and cure them in enough better condition to pay for the cost in a single year; while with a little care in housing, they will last many years. No farmer who values peace of mind, or good sweet hay, should be without a full supply. A cheap and easy way of making them is as follows: Take strong, unbleached cotton cloth, about forty-five to fifty-four inches wide, and cut it into squares. A larger size would hinder good ventilation of the cocks. Some persons sew into each corner a round stone weighing about eight or ten ounces, to keep the caps in place; others prefer to attach loops of stout linen cord at the corners, for pegging them down. This last method is by far the best in case of high winds. Many farmers use pegs or wires permanently attached to the caps by a cord 6 or 8 inches long. The wires are about a foot long, bent to form an eye at one end, and somewhat pointed at the other. Where wooden pins are used, they are of good stout twigs, or pine, (may be cut from shingles), ¾ to 1 inch in diameter, and 10 to 14 inches long. They may be permanently tied to the caps, or preferably, perhaps, kept separate. When the caps are spread over the cocks, a good careful man takes the pegs in a basket, goes from cock to cock, and puts in the pegs, drawing the cap down tight, and giving the peg quite an upward slant. It is much better to *tie* the cords to the caps than to sew them on, for the corners are puckered by the tying, and the sides shortened, so that there is less danger of their flapping up and taking the wind. When stones are used, it is claimed that the caps are much easier put on and taken off, and that the danger of their blowing off is slight. We prefer the attached loops, with the pins of wood by themselves. It is a job for a rainy day to make a few thousand if you wish—and if they are made of good white-pine shaved shingles, they will be easily picked out of the hay if they get in; and will even run through a hay cutter, in careless hands, without doing it any harm. The caps must never be pegged to the ground, for the hay will settle and leave the caps loose and flapping, and almost sure to blow off. When a heavy rain comes on, always visit the field and see if all the cocks maintain their conical form; if not, raise one corner of the cap and stuff a handful of hay into the crown. Of course, if a *hollow* exists any where, the rain will settle into it and run through. It is neither necessary nor desirable to have the caps made water tight, by any means. They need no hemming.

For the American Agriculturist.

Irrigation Naturally Favors Soil.

While much has been written and well written on draining the soil, but little has appeared in favor of irrigation. I think our great country is loosing much for want of attention to this subject. Having been experimenting some with irrigating, I offer my opinions about it. We have a large quantity of land in this country lying along streams, much of which, especially along large streams, is coarse, gravelly, sandy soil; on this land vegetation starts very early in the Spring and so long as rains fall once or twice a week, continues to grow; but a few days of hot sunshine dries it up. Manure helps the crop surprisingly for the first year, and then it is nearly exhausted. I once thought this was on account of the openness and looseness of the soil, but I have long since changed my opinion, I now believe the strength of the manure evaporates instead of going downwards—(am I right?) This kind of land needs no underdraining, and in short, is very poor land, seldom giving a good crop. But it is the best kind of land to improve by irrigation, that I know of. It becomes warmer when exposed to the sun than any other, and

this is one reason why irrigation improves it so much, for by flowing over it water loaded with fine particles of soil, animal and vegetable substances, the nature of the top soil is entirely changed. The gravely soil separates all the sediment by filtration, and the water passes through it clarified. The poor worthless sand is entirely changed to a beautiful loam, with the best underdraining that can be made, for the gravel remains a few inches below the surface open and porous as it was before. It is true it takes time to bring about this change, for the soil is so open you can not get the water to flow over it until it has tightened the soil. This is accomplished by degrees; every shower that raises the stream does something towards enriching the soil and filling it up, until it gradually extends over the field or meadow, when it will not require half the water needed at first.

A large portion of the land on mountainous districts, or rather what is called rolling land, is capable of great improvement by irrigation at a trifling expense. How often do we see our neighbors up the stream laboring, toiling, and hauling lime and manures of various kinds to prepare their land for a crop; and when they get it well pulverized, and the fertilizers well mixed with the soil, then comes a heavy dash of rain, often washing away a large part of the manure; and it comes rushing over our property, carrying away a portion of our labor with the rest. Now this is unavoidable, but if we could flow this water over a field laid down to grass, our land would become a kind of filter, and catch a good portion of this rich treasure as it passes by. Chemists tell us that common spring water contains in considerable quantity the ingredients needed by all growing crops—just what our land needs. If clear water contains so much nourishment for vegetation, what a large amount must the surface water from cultivated fields contain? Is it wise in us to let it pass by when we might at so small an expense enrich our soils with it? These little mountain streams are often loaded with matter from decaying leaves, etc., and thus prepared to invigorate vegetation; and as these streams start at a great elevation, they may be conveniently made to flow over a good portion of the farms below. J. C.

Frenchtown, N. J.

The Potato Disease.

A writer in the Mark Lane (Eng.) Express, who has made the potato a study for years, arrives at the following conclusions respecting their diseased condition: The fungus which causes their decay is always perceptible with the microscope, and usually to the naked eye. It generally attacks the stems first, and then descends to the tubers. The same fungus is discoverable in the diseased tubers, and in the soil contiguous to them; and a like fungus has never been found on healthy haulm or tubers.

This fungus, when carefully removed from the diseased leaf and transferred to the substance of the healthy tuber, will originate the specific disease at the points of inoculation in from 4 to 8 days. Every sort of potato will, under favorable conditions, suffer; but, as a rule, the thicker the skin the less prone is the tuber to offer a timely nidus to the spores. All remedies of any practical value in checking the disease, are reconcilable with its fungoid character; and as a safeguard diseased stems and tubers should always be burned or deeply buried. Warm, humid weather, with a gentle breeze blowing from a variable point, is favorable to the invasion and rapid progress of the disease; whilst cold, dry weather temporarily checks its advance. The writer's practice for the stay of the disease consists in cutting off and removing the haulm close to the ground when diseased about half way down. Rake the soil over the lower portions of the stems, and leave them for a month. This plan is inexpensive, and usually gives a fair result, in some seasons there being only three, and in others as high as ten per cent of diseased tubers. Those not infected were of good size, mealy, and kept well.

Another good plan is to plant on ridges, and when the disease appears in the haulm, turn it down right and left, and place a little earth over the roots. The fungus is thus washed *away* from the tubers during a rain. [We give the above not to endorse them, but only as the views of one who speaks somewhat positively, and apparently from intelligent experience.—*Ed. American Agriculturist.*]

Haying Time.

In the present month, begins the great hay harvest. This is, in many respects, the most important in the whole year. Although the crop does not fill the space in the public eye, as an article of foreign commerce, which cotton does, it is yet of *greater money value.* Think of its fundamental use, the support of all kinds of farm-stock for six or seven months of the whole year. As one says: "It is, in fact, the basis of all our farm operations, the keystone which sustains them and gives them all their success. The test of a farm is the number of cattle it feeds, and the cattle in turn feed the soil." Let us, then, see to it that our crop this year is well and seasonably made and properly stored.

In preparing for this annual campaign, be sure that all other pressing labor is out of the way. This work is enough of itself to occupy one's time and thoughts while it lasts; to have other cares superadded, harrasses and perplexes one so much as to make his true and proper work very disagreeable. Get all other matters well ahead, so as to feel at ease about them. Then, see that the tools and implements are in complete order—scythes, grindstones, mowing-machines, hand-rakes, horse-rakes, pitch-forks, wagons, racks, and hay-caps. The extra hired help—is that engaged?—enough of it?—and of such a sort as to be reliable?

The best time to cut hay, is an important matter to determine. The *end* sought in gathering hay is, obviously, to cut it when it contains its most nutritive properties, viz., mucilage, starch, gluten and sugar, in the best state for their preservation. Experience shows that *that* period is when the grass is just in full flower. After this time, the fiber becomes woody and indigestible. The Cyclopædia of Agriculture says: "It has been proved that plants of nearly all sorts, if cut *when in full vigor*, afterwards carefully dried, without any waste of their nutritive juices, contain nearly double the quantity of nourishing matter which they do when allowed to attain their full growth, and make some progress towards decay." Yet, some good farmers hold that Timothy should not be cut until it passes this stage, and has nearly ripened its seed; and this chiefly for the reason that, if cut earlier, the roots are weakened and the meadows gradually destroyed. Still, as a general rule, the prevalent method of cutting grass "when in the milk," is the right one.

When hay is to be cut with scythes, the work should begin early in the day: the morning dew is a great help to the mower. There should be a liberal resting time at mid-day, and then the work resumed and carried on briskly until evening. A lunch of plain food, moistened with cold coffee or home-brewed beer, may be brought into the meadow in the middle of each forenoon and afternoon, if the hands will be discontented without it, but it is poor policy to keep the hands and the stomach both at work all the time, and three good meals are *best* for any man, however hard his work. There is enough heat in haying time without the addition of "fire-water." As to the expediency of using mowing-machines, we declare decidedly in their favor, especially on farms of considerable extent. They save time, labor, a great deal of anxiety, and in the long run, money. When the mowing machine is used, do not cut a rod before the dew is entirely off, for when the hay is cut by the machine, unless very heavy, it will need no stirring.

"Make hay while the sun shines," is a good rule, but it may be carried too far in haying time. We want the bright sunshine first to wilt the hay thoroughly; then let the drying process stop. Rake up the grass in high cocks while still hot. If rain threatens, put on the hay caps; put them on by 4 o'clock to keep off heavy dews. The grass may lie in cocks two days or less, as convenient for the farmer. On a clear day, open the cocks, about the middle of the forenoon after the ground is warm, for an airing, spreading the hay and turning once or twice for two or three hours; then haul to the barn. The practice of salting hay, at the time of storing it, is quite common, and it is applied the more abundantly when the hay is imperfectly cured. A little salt, say two or three quarts to the ton, can wisely be applied. More than this does little good, and on the whole, may be injurious.

One Cause of Drouths and Freshets.

It is plain to every observer, that our country is now more subject to drouths than it was twenty or thirty years ago. Within the last five years, we have suffered in this respect seriously. The loss to the farming community, and through it to the whole population, has been many millions of dollars. If they continue for several years more, in frequent succession, there is reason to fear that the "hard times" will pass away very slowly. Is there any natural cause of drouths, or are they sent upon us solely as special visitations of Providence for our national sins? We would not speak lightly of such visitations, but we are inclined to think that our sufferings in this particular may be traced chiefly to our own bad management. The wide destruction of our forests doubtless has something to do with the production of drouths, and of those destructive floods or "freshets" which are becoming alarmingly frequent.

If the country is widely denuded of its trees, the land is more exposed to the burning rays of the sun, and to the winds which cause a very rapid evaporation. Then, too, forest-trees are so many pumps to suck up moisture from the depths of the earth, and to diffuse it through their leaves into all the surrounding atmosphere. From thence it falls upon the surface of the ground. Perhaps some of our readers have amused themselves with making estimates of the amount of water evaporated from the leaves of a single tree, and then of a large forest, in a single day. To one who has never thought about it, the subject is one of great interest. All readers of history know that many of the rivers and streams of the old world, which once were

wide and deep, have now shrunk into much smaller dimensions; from what cause, can any one tell, if not that the hills and mountains are now almost entirely bereft of trees? Drouths prevail all over the Eastern continent, with increasing severity; and scientific and observing men everywhere proclaim that this is owing chiefly to the cause of which we now speak.

Valleys and low-lands, and fertile plains should of course be cleared of trees and devoted to farms and gardens; but at least the rocky hills and mountains should not be shorn of their leafy honors. Let the trees stand sacred from the desolating ax, all along our hights, to break the fury of storms, and to condense and bring down the useful vapors of the clouds upon our fields and into our springs and streams. It is high time that the older States of the Union began to move in this matter, either regulating the destruction of our old forests, or encouraging the growth of new. We believe that some wholesome laws touching this matter would both secure our posterity a good supply of lumber, and a good degree of exception from drouths.

All that individuals can do in this matter is to preserve their own forest land in just proportion, and by underdraining, thus deepening the soil and giving it a porous spongy character, render the land capable of absorbing and retaining as large a quantity as possible of the water that falls upon it, instead of allowing a large portion to flow off as is now generally the case. Our State Legislatures might, we think, with great propriety remit the taxes for 20 years on all land devoted to high forest, (not *low* woods for charcoal and hoop poles,) and tax land which might but does not carry a good growth of high or low woods at the rate its value would warrant if properly improved. FORESTER.

Improvement of Pine Plains.

At the mention of the words "pine plains," whose thoughts do not at once recur to such regions as Saratoga and Schenectady counties, some portions of Connecticut, Long-Island, New-Jersey, Virginia, and indeed other large sections of the country? Can anything be done to improve this land, much of which is like an ash-heap, and all of it comparatively sterile? Experience shows that it can be ameliorated, yet not without labor skillfully applied.

In many cases this soil has an underlying stratum of marl, which contains most of the ingredients necessary to restore its fertility. And wherever this marl does not lie so near at hand, it can generally be obtained from other quarters at no great expense. We have been informed of its being applied to barren, sandy knolls, which produced no sort of vegetation whatever, and which blew about in the wind; the result was that these knolls yielded a crop superior to that on any other part of the field; these other portions being in good ordinary condition, but receiving no sort of manure. The application of marl serves to give tenacity and consistency to the soil, and prepares it to profit by the vegetable and other manures which should be applied in routine afterwards.

The frequent practice of renovating these lands by clovering and plastering, is excellent and economical. The objection sometimes made, that the clover roots are thrown out by frost, may be removed, partially at least, by thorough harrowing after seeding, and then following with the roller. The usefulness of this last named implement on light soils, is not yet so fully appreciated as it should be.

For lands of this sort, the best rotation is: clover turned in for winter wheat; Indian corn; and barley, oats, or spring wheat with which clover and timothy grass should be sown. Always let the roller follow the seeding. It crushes lumps, fills up interstices, makes the surface compact and smooth, hastens the germination of seed, and causes the roots to strike deep in the soil. The next year after seeding the ground to clover, apply a good dressing of plaster, and devote the land to a hay crop. Next year, plaster again, and let the clover grow until about the last of June, when the sod may be turned under and the land devoted to a grain crop. As to the best method of preparing the ground for wheat, farmers do not quite agree. After the sod has once been turned under, some cross-plow and thoroughly break up the turf before seeding. Others do not disturb the inverted sod, but sow their seed on top of the furrows, harrowing it in and rolling smooth. Farmers are not all agreed whether wheat or corn should follow clover, nor whether the sod should be broken up in Fall or Spring just before planting. This rotation of crops should be accompanied with such annual dressings of marl, ashes, plaster, and such other manures as can be obtained. Muck or swamp mud strengthen the texture and enrich the soil.

For the American Agriculturist.

Demolish Your Fences.

The advice is somewhat radical for an orthodox conservative journal, you say. But perhaps the reader will not differ from the writer very much, when he comprehends our meaning fully. The most conspicuous feature of the northern farm, is its fencing. It must have been a ruling passion with our fathers, and one groans in the spirit to think of the weary days and months they spent in laying stone wall. We have before us, as we write, a little patrimony of twelve acres, cut up into lots of one acre, ¾ of an acre, 1¼ acres, 1½ acres, 2 acres, 1 acre, and the only reason why the balance was not still further divided was the fact that it is a swamp where stones were not convenient for building. This subdivision of land is only a little in excess of what prevails on a large class of farms, particularly those in rough or rocky lands. Farms of one, two, and three hundred acres are numerous, on which there is not a cultivated field of more than ten acres; while one, two, and three acre lots are numerous. Nothing but the pastures were left of tolerable size, and these only because they were too rocky or wet even to admit of plowing. I know of a farm in Connecticut of one hundred and sixty acres that is cut up into twenty five separate lots, including woodland and pasture. Excluding these, the fields would not average four acres each. The fencing upon this farm is much like that of the farms in the neighborhood, and is only mentioned because I happen to be acquainted with it. Taking only one half this as a fair average of the fencing of the improved land in this and the adjoining States, it makes a very formidable item in the expense of the farm. The fact is one that will not be disputed, that there are a great many pretty good farms in New-England, and New-York, at any rate, that will not sell for what the fences cost. An estimate of the cost of fences in the State of Ohio, made by the Board of Agriculture, amounts to 115,000,000 dollars. What the motives of our fathers were, in encumbering the soil with so much fence, except where the land was to be cleared of stones, it is difficult to conceive. If the idea was to get rid of the surface stones, they signally failed, for what can be more in the way of cultivation than a stone wall on the four sides of every acre of land?

Whatever the objects in view, they were no compensation for the manifold evils of small inclosures. The yearly expense of keeping these fences in repair is enormous. It is estimated that it equals the whole cost of renewal once in 15 years. The cheaply built stone wall is soon thrown out of line by the frosts, and is thrown down. The stones often have to be put up every Spring, when the farmer wants his time for other purposes. They hinder cultivation more than any one would suppose, who had not practical acquaintance with the evil. The loss of time to the man and team in turning round at the ends of an acre lot in plowing, harrowing, cultivating, mowing, etc., is very great. The loss of land is also considerable. If a wall is only four feet wide inclosing an acre, yet counting but half, it will occupy six square rods, or about four per cent, making one acre in twenty five. But beside the land actually taken up by the wall, there is a space each side difficult to plow. I have no hesitation in saying that three-fourths of our stone walls are a nuisance that call loudly for abatement. They are an eyesore upon the farm, and as much a blot upon our husbandry as they are upon the beauty of our landscape.

But what shall be done with these walls, if we come to this sweeping conclusion? That of course must depend somewhat upon circumstances. Where the land is worth forty dollars or more an acre for cultivation, I would say use them to construct stone drains. This will put them out of sight, and at the same time put them to a good use where they will pay a large interest upon the money spent in sinking them. A drain constructed with this object in view makes a market for a great quantity of stones; it carries off all surface water, and permanently benefits the soil for rods on each side. A case recently fell under my notice in which one of our best cultivators had dug ditches 3 feet deep, and 4 feet wide at the bottom, and made them the recipients of an immense quantity of stones. The *increased* yield of grass he estimates as paying annually the interest on $300 per acre over and above the extra expenses of cutting and curing. But there are a great many poor farms worth on an average not more than ten dollars an acre, and the poorest part of them not worth five. What shall be done with the fences in this case? To sink the walls for underdraining would cost four or five times as much as the land is worth. If I owned such land I would either sell the most of it, or hire capital to improve it. In its present condition it hardly pays taxes, and the expense of working. We might remove the old fences, and underdrain thoroughly, as far as we went. Clean smooth fields embracing about one-fourth of the whole farm are the desirable thing in husbandry. With the exception of inclosures for the garden and orchard, and a small field or two near the barn, we would demolish all other fences as fast as we could.

The expense of a boy and dog, or a regular herdsman on large farms, is not by any means so great as that of building and maintaining fences as we do throughout this country, to say nothing of the gain in land and other advantages. Cattle and sheep constantly herded and attended by some person, are docile to a surprising degree, and the ability to regulate their feeding so as to accomplish a saving of feed, by making their feed regularly over one part of the pasture at a time, of itself is said to pay the expense of the herdsman. CONNECTICUT.

TENDING GEESE.—FROM A PAINTING BY E. MEYERHEIM.—*Engraved for the American Agriculturist.*

Treatment of Strawberries in June.

Next after clean cultivation, they want water or liquid manure. If the soil is a light loam, gravelly, or artificially drained, it can hardly have too much water. The plants are either in full flower, or full of berries ripening from day to day, and they need abundant supplies of moisture. The days are at their greatest length and the sun shines in its greatest splendor.—The evaporation in one of these long bright summer days is immense, and a drouth just in the critical time often diminishes the strawberry crop one half or more. Mulching is of great advantage as it retains moisture as well as keeps the fruit clean. We can only get the largest berries with abundant watering. For the flavor we are somewhat dependant upon the sunshine. So great is the advantage of watering that we think it would often pay, even in field culture, to have an apparatus for the purpose, like the water carts for sprinkling city streets. In the garden it is entirely practicable, with a garden engine, hydropult, or common watering-pot.

One of the best methods to get plants for a new bed is to start them in thumb pots, as early in the month as practicable. An old plant is surrounded with these pots, and the runners strike their roots into them, and form vigorous plants, which may be transferred to the new bed about the first of August. The roots are perfect, and the plants are not put back. Nearly a full crop may be expected of such plants the first season after the bed is prepared. Of course, old plants that are used for propagating, can not be expected to do much else. A few of the plants may be struck in four inch pots, and kept for the conservatory or parlor in the Winter. Both the flowers and the fruit are ornamental.

The Raspberry.

Cultivators of limited experience are not so generally successful with this fruit, as with the strawberry. All the finer varieties are either of foreign origin, or seedlings of such sorts. Even if not tender or half hardy, they are certain to do much better with a few inches of earth over them, during the winter. Though this is very little trouble, involving less than a half dollar's expense in an ordinary garden, most people will not take it. (After years of trial we have abandoned both the native red and the black. We have many sorts, larger and better every way.)

Others, and they are the great majority, leave the canes to take care of themselves. They are generally planted by the side of a fence or stone wall, where hoeing is inconvenient, if it were the policy to practice it. The old canes are not removed, the new ones are not thinned, and the stools all run together; and between the weeds, grass, and excessive growth of wood, there is little or no fruit, and an utter want of cultivation.

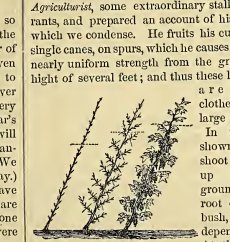
In other cases the leaves are annually attacked by insects about fruiting time, and the young shoots are stunted, and the fruit is imperfect. It is a clear case, that we can not have fine raspberries without some trouble—a little of it at every season of the year.—Just now, the insects must be attended to, or the crop is injured, if not ruined for this season and the next. We have tried nothing quite equal to whale oil soap for all the varieties of worms that attack the leaves. It should be applied in a dilute state, say four pounds to a barrel of water, or the remedy may prove worse than the disease. It is best applied with a garden syringe, though a watering pot with a fine rose will answer. A strong decoction of tobacco is also excellent, and will destroy most of these pests. We have always found it of great service to water raspberries while fruiting. They will drink in soapsuds, and all liquid manures as greedily as a grape vine, and are as much benefitted by it.

There are various expedients for supporting the canes. Some tie them to a single rod or pole driven down by the side of the stool, and where the leaves are already out this is the best method. A better way, earlier in the season, is to tie the tops of the canes in adjacent stools together, in the form of an arch. This arrangement is quite ornamental and is as convenient for picking as any. But the best arrangement is to tie the canes to a wire trellis. Posts of any convenient size, 4 or 5 feet high, are set about 12 feet apart, in the row with the stools. Two number 10 wires are now fastened about 18 inches apart on the posts, and the canes are spread out in fan shape and tied to the wires. This is ornamental and at the same time, gives the plants the most air and sunlight. The old canes are to be removed as soon as the bearing is over, and five or six only of the new ones left to grow.

"Espalier" or Wall Training of Fruits.

Whoever has not practised the close pruning and training of fruit trees upon trellises or walls shrinks from attempting it, as from a great labor likely to be unremunerative. But whoever begins, even in a very humble degree, becomes almost uniformly an advocate of the practice.

The Currant, is probably the easiest of all fruits to experiment upon, and from practice with it the general principles of close pruning may be learned, while the results are most gratifying. Last year George H. Hite, of Morrisania, N. Y., placed upon the exhibition tables of the *Agriculturist*, some extraordinary stalks of currants, and prepared an account of his process, which we condense. He fruits his currants on single canes, on spurs, which he causes to form of nearly uniform strength from the ground to a hight of several feet; and thus these long canes are perfectly clothed with large fine fruit. In fig. 1 is shown a strong shoot thrown up from the ground at the root of an old bush, or an independent cane. At the end of the first season, it is cut back one *third*. If attached to a trellis or otherwise made to incline the next spring, the buds will all break uniformly from top to bottom. If it stands upright, the sap will flow chiefly to the uppermost buds. When the buds have grown a few inches, as shown at fig. 2, they are pinched off to leave spurs about an inch long, as shown enlarged in fig. 4. These will develop a rosette of buds at the base of each, which are the fruit buds for the next season. The terminal bud at the top of the cane is left, and will have stretched upward considerably. In the autumn shorten it in one fourth of its growth; and the succeeding years still less. The next year the cane will bear full, as shown at 3; and if the soil be good, and the bush has air and light, the fruit will be large and fine. The spurs must be prevented from growing long, and they will bear year after year. Several such canes may be grown from an old root, while the old bush, by stopping in the spurs, will bear much better until the new canes are ready for full bearing. Currants may be set out about a foot apart, two or three such canes grown upon each root, and thus in small compass yield an immense quantity of fruit. (Fig. 1 is proportionately too long.)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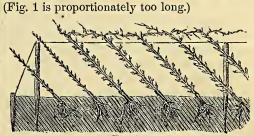


Fig. 5.

Fig. 4.

Apples and Pears may be subjected to very similar treatment, being planted close, or further apart, according to the system followed or the hight to which they are wanted to grow. Fig. 5 shows an experiment conducted by Mr. F. Otto, in our own garden, which promises success. Dwarf apples are planted one foot apart, and trained to a rod 18 inches above ground. (A wire is perhaps preferable). The inclined position causes them to break throughout their length quite uniformly, and to secure this a greater or less degree of inclination or curving may be given. The spurs if kept closely pinched in, form fruit buds. The tops when they have reached the hight desired are allowed to branch somewhat, and the branches are inarched or grafted together by approach, so that after a few years the fruit-bearing hedge thus formed will be self supporting and substantial and ornamental. Keeping fruit trees under this close control enables us to secure healthy, well developed fruit buds on the spurs, and to protect easily the tender kinds from frosts. Peaches, plums, and berries, do very well upon walls or trellises.

Rout the Curculio.

This enemy of the plum can be routed without the old and laborious process of jarring the trees, and gathering the insects upon sheets. The following remedy has been several years before the public, and has the recommendation of Mr. Cummings, and some of our best pomologists. The writer has used it with success and now feels as sure of the plum crop as of pears. To one pound of whale oil soap, add four ounces of flowers of sulphur. Mix the mass thoroughly with a spatula or knife, and dissolve in about twelve gallons of water, stirring it well.

To one half peck of quick lime, add four gallons of water and stir well together. When fully settled, pour off the transparent lime water, and add it to the soap mixture. Add to the same, also, say four gallons of tolerably strong tobacco water. Apply this mixture when thus incorporated, with a garden syringe, to your plum or other fruit trees, so that the foliage shall be well drenched. If no rains succeed for three weeks, one application will be sufficient. It should be repeated after rains until the stone is hardened. When the plum is about the size of a pea is the best time to apply it, but it is effectual upon all plums not yet stung at any stage of their growth. This mixture is good for cherries, and all fruits troubled with insects. *

"Celery as a Field Crop."

To the Editor of the American Agriculturist.

As the writer of the article under the above heading in the March *Agriculturist*, I am induced to reply to the doubt you express, that under the treatment described the celery would not be tender. Permit me to assure you that the very reverse is the case. Celery earthed up in the usual way, when in full growth, tastes much stronger and is far less crisp than when blanched by the trench system. This we find to our cost, as our workmen, when preparing it for market, devour it in great quantities in the Winter, while they rarely touch it in the Fall when it has to be blanched while in the growing state. The principle in blanching celery by the trench system is nearly similar to that practiced in forcing Sea Kale and Rhubarb, and all who have practised it know the high degree of crispness and tenderness attained by growth when excluded from light (and partially from air), as is the case in this method of blanching celery, or forcing of Sea Kale and Rhubarb. I have grown upwards of 15 acres—nearly half a million roots—of celery annually for the last ten years, and in that time have preserved it in various ways, but in no way so safely and cheaply as by the system described in the March *Agriculturist*. In fact nineteen-twentieths of all the celery sold in the New-York markets is thus blanched; all my neighbors for miles around, practice this method exclusively. A JERSEY MARKET GARDENER.

The White Kidney Bean.

"You don't know beans," is a term of reproach much more generally deserved than the world supposes. We have gone through the whole catalogue of beans, pole and dwarf, China, Scipio, case-knife, asparagus, wild goose, marrowfat, cranberry, etc., and have never found any thing to compare with the white kidney for baking. The Lima is decidedly better as a table vegetable, and for making succotash. But the Lima is a pole bean, and is not a sure crop in all parts of the north, while the kidney is as easily raised as the common white field bean, and will mature where any bean will. It should have a good soil, and we will say here, in passing, that we have never known it to run to vines, planted in the richest soil, or at any time of the moon. It is not quite as early as the China, but bears far more abundantly. It is excellent as a snap bean, but baking alone brings out all its excellences. It is easily cooked, very delicate, and thin skinned, and entirely free from the strong taste which marks most pole beans. It is not very widely known, but is so far appreciated that it always bears the highest price in market. It is well known in the cities and among epicures, and ought to be better known among villagers and farmers. We suspect the majority of our readers are still strangers to a perfect dish of baked beans.

Spontaneous Vegetation—Query.

To the Editor of the American Agriculturist.

I have been pleased and profited by your remarks on spontaneous vegetation, and believe them founded in scientific truth. But a few facts have come to my knowledge, lately, which are noteworthy: I send the nuts to your learned readers to crack. Some years ago, a low piece of ground in the suburbs of Albany was raised by dirt brought in by railway trucks from a distant hill side—a hill which had not been disturbed perhaps for centuries. Yet, no sooner had this "made land" been leveled off and allowed to stand for a few weeks, than it produced a rank growth of weeds and grasses. Now, did this vegetation spring from an original principle in the soil, or from seeds, perhaps a thousand years old, buried in that hill?

After the great fire in London, in 1666, the entire surface of the destroyed city became green in Summer with multitudes of a cruciferous plant—the *Sisymbrium iris* of Linnæus. How came they there? Did the fire beget them?

When a salt spring occurs far from the seashore, numerous plants peculiar to maritime regions, are often found in the neighborhood. Does salt air evoke these plants from the soil?

If a lake or pond happens to dry up, the bottom will exhibit a vegetation unlike that of the banks or adjoining fields. Whoever cracks the nuts, let him report. SCHOLASTICUS.

For the American Agriculturist.

The Best Time to Prune.

An old clergyman is quoted as defining this time to be "when your knife is sharp." He was certainly half right, for a smooth clean cut is very essential to the healing of the wound. But there is very great difference in the healing of wounds on account of the season in which they are made. Pruning done in March and April, especially if large limbs are removed, often injures an orchard for life. The sap oozes from all the pores and runs down upon the bark, discoloring and oftentimes destroying it—called scalding. Without other protection, decay begins, and in a few years you have a hollow limb.

We like the month of June for pruning better than all others. If the work is done soon after the new wood begins to form, the wounds made by the removal of small limbs will be nearly covered over the same season they are made. The leaves make such a demand upon the wood for sap that none of it escapes from the wounded pores. It is also a favorable time for thumb pruning. By watching the growth of the shoots upon young trees they may be brought into symmetrical shape without much use of the knife.

JONATHAN.

Raising Peaches.

To grow them from seed, bury the pits in shallow boxes in alternate layers of sand or light earth, and expose them where they shall get a good freezing. This will crack the shell and favor their germination. Those which do not get cracked by the frost, must be broken with a hammer. The best soil for the peach is a rich warm, gravely loam. Plow and harrow into fine condition for working. Lay off the drills three feet apart, and plant the seeds ten inches asunder in the drill, and about an inch deep. This should be done as early in the Spring as the weather will permit. When the shoots appear above ground, go through the rows, and with hand and hoe give them a good weeding, otherwise they will get smothered. When about six inches high, put a cultivator into the rows, using a very careful horse, and then follow with the hoe. This will expedite the growth of the seedlings: in ordinary cases, the planter will have no reason to complain of the slow progress of his little trees. In many cases, budding is not resorted to; it is thought enough to grow new trees from good seed of good parent trees. But, by all means, avoid seed from trees which have the Yellows or any other disease. If pains is taken, one will get good fruit, though it will vary somewhat from the stock. But when it is desired to propagate any known varieties, budding must be resorted to. When this is done, the operation should be performed on the larger seedlings, in the latter part of the first season; say, from the first to the middle of September. As the peach grows quite late into the Fall, this will give the bud time to unite well with the stock before Winter. Next Spring, before growth begins, head back the stock; the bud will soon start, and grow several feet in the season. It will be ready to transplant in the Fall.

A word in reference to the situation of the peach orchard. To guard against late Spring frosts, avoid low, rich ground, and choose rather high and rolling land. Here the trees may grow less luxuriantly, and the fruit ripen a little later, but frost and various diseases will make less trouble. It is a mistake, however, to suppose that the peach is partial to a poor and thin soil. It is often put into this, as in Delaware and New Jersey, because this land will yield no other crop so remunerative. It is chiefly because of the poverty of the land that the peach orchards there are so short-lived, often flourishing no longer than three or four years. Give the peach a good, substantial loamy soil, well drained and moderately enriched, and it will very often remain productive fifteen or twenty years.

In setting out a young orchard, choose fresh land. Plant the trees 16 feet apart unless you know that they are likely to live more than 12 years. Give the land a light annual dressing of manure, and keep it well stirred. After the trees have begun to bear plentifully, no other crop should be taken from the land.

They may be pruned during the growing season to advantage, by pinching in the shoots in such a way as to give a compact and uniform top, and keep the fruit more within reach. The tendency of the sap, the most rapid growth, and much of the fruit, are always towards the ends of the limbs, and thus, each year, our pruned trees stretch away further and further from the ground. Pinching in gives larger and better developed leaves, better buds for next year, and greater perfection to the fruit, which is borne both on year old, and still older wood. The blooming is so profuse that little fruit is lost by pruning. When thus shortened in in Spring or Autumn, better the former, cut back, leaving only four or five good buds on wood of the past season's growth, and remove at the same time all side shoots that fill up the tree too much.... The experience of Mr. S. S. Gregory, Cuyahoga Co., O., is interesting on some of the points, and we give it as he writes to the *American Agriculturist*:

"Fourteen years since I purchased fifty peach-trees, at eight cents a piece. One of these trees was of "natural fruit," and the remainder were of four sorts: the Melocoton, Morrisania, and the Red and Yellow Rare-ripes. The soil upon which they were set varied in character, part being a gravelly dry loam, tolerably well calculated for peaches, and part just the reverse, low and wet. Since setting out, part of the trees have yielded fruit four times, while a part died without producing enough to pay for the cost and trouble of planting them. As near as I can estimate, besides a bountiful supply of peaches for my own use, the receipts for the fruit sold from the bearing trees have been amply sufficient to pay for all the trees originally purchased, *and for the land upon which they stood.* The chief, and perhaps the sole reason why the bearing trees failed to bear, ten of the fourteen

years, has been hard freezing, which combined with a heavy wet undersoil, killed part of the trees, and materially injured the remainder. Of the fifty trees originally set out, there are now about a dozen remaining alive, and these, with the exception of the one bearing natural fruit, which was bought through mistake, give unmistakable signs of old age. And yet, in 1860, these decrepit trees yielded fruit sufficient to pay for all their cost and the land upon which they stand. In my experience with these trees and about one hundred and fifty others since set out, I find invariably, where the trees were set on land having little gravel or sand, and where the subsoil was heavy and wet, they either died or became so withered as to be of little use—except as a lesson to those setting out peach trees. I find that mulching the trees with straw, leaves, etc., is profitable. It helps to keep a sod from forming round the roots, and greatly promotes the growth of both trees and fruit by preserving a proper degree of moisture. I find that trees of the same sort produce very different sized peaches according to the soil in which the trees are planted; but the size materially depends also upon the number of peaches on any tree. Often trees having only one or two hundred peaches on each, will have fruit of double the size of those which are loaded down to their utmost capacity of bearing. And on the highest limbs where comparatively few peaches grow, the fruit is of a size much larger than on the lower limbs which had many peaches on them. The fruit on a few of my trees was of an inferior quality, on account of my setting them in localities where the ground was too rich."

Experience with Dwarf Pears.

Nothing is more various than the experience of cultivators with this fruit, and nothing more unsettled than the dwarf pear question. Meet one fruit grower, a little enthusiastic, and pump him on this subject, and he tells you that nothing is easier than growing fine dwarfs. Look into his garden, and you see them—splendid pyramids, the bark as clean as the skin of his favorite colt, the limbs coming out nearly at right angles, and loaded with handsome fruit. Look at the further end of his garden, and quite likely you find a tub of soap suds, sink water, or fountain of liquid manure, which reveals the secret of his success. Meet another gentleman, and he tells you dwarf pears are a humbug—a wicked device of nurserymen to impose upon the public. Look into his fruit yard, and you see them dying, dead, bored at the collar by worms, sap blighted, covered with scale bugs—a very good basis for the owner's opinion.

What is the truth upon this subject? Both these men are right. Dwarf pears are a success with the first man, because he takes care of them, and a nuisance to the latter, because he pays no attention to them. I have been cultivating pears since 1850, and have now about 150 trees, standards and dwarfs. The first trees planted were suckers, contrary to the advice of the books, and to the practice of the best pomologists. They were respectively budded with the Flemish Beauty, Louise Bonne de Jersey, White Doyenné, and Winter Nelis, and have never thrown up a sucker. The last two bore for the first time last year, though they have had good cultivation, plenty of manure, and have been shortened in every year. The others began to bear three or four years earlier. They are all well set with fruit buds, this year, and will bear, probably, a full crop. It is a work of time to make a standard pear tree. The next lot was from a traveling agent of an unknown nursery. They did poorly, but with careful nursing got to growing in about three years, and two only, one a dwarf and the other a standard, have made good trees. The standard is a Muskingum, which bore for the first time last year, ten years from the planting. It comes about ten days earlier than the Bartlett—is nearly as large, and to my taste, is better. It is now full of fruit buds, and is making wood fast enough. The dwarf is of unknown variety, bears well, and is growing rapidly. Eight years ago I budded a Flemish Beauty and the Glout Morceau, upon the common Orange Quince. They are among my most thrifty, handsome, and fruitful trees.

A White Doyenné from the nursery, on quince, began to bear the second year, and bore itself to death in three years. The fruit was fair, and without cracks. It was my ignorance that killed it. Another, budded upon a common quince, has made but a poor growth, and never will amount to any thing.

About five years ago I bought a lot of dwarf Louise Bonnes from an honorable nurseryman. They had been in bearing a year or two, and I let them continue to bear, until at this time they are all dead but one. This was my fault.

I bought two Glout Morceaus and three Vicars, dwarfs, about ten years old, the following season. Owing to a second removal two of them died. The other three grew vigorously, and the Vicar has borne fine crops every other year. All are making wood fast enough, and are doing as well as I could desire. Two Epine Dumas bore well for three years, and were destroyed by grubs. This was also my fault. They should have been planted deeper, and have been examined more frequently. This is one of the new pears, an abundant bearer, of excellent quality, ripens in November, and is worthy of a further acquaintance. The Andrews and Bloodgood are hard cases. I could never make them flourish, and after many trials, have not a tree that I should like to show to my neighbors. Have two Dix on quince—one dead and the other alive, but not flourishing. The standards grow, and possibly my grand-children will eat fruit from them, if they occupy the homestead. The dwarf Urbaniste trees have grown finely, but have borne no fruit, six years after planting. The Beurré d'Amalis does well, both as dwarf, and standard, but the fruit is not first rate.

The Buffum makes a tree and fruit that I am altogether pleased with. It grows uniformly in the Lombardy poplar shape, occupies little room, looks "genteel," and is just the tree to plant beside garden walks and avenues. The St. Ghislain, and the Seckel also look well in the same localities. The Buffum looks temptingly upon the tree, and is good enough upon the table. It is one of the best sorts for the seashore, near which it originated. The same may be said of the Flemish Beauty. The Bartlett does so well, and bears so easily as a standard, that it seems a mistake to dwarf it in any case. The only way in which I have been able to get any wood upon young trees, is by persistently cutting off the blossom buds. If this is done for the first five or six years after planting, you can make a vigorous tree, of good form, that will give abundance of good fruit in due season.

I find as the result of my experience, that I am running more and more to standards, though I have still faith in the utility of dwarfs for the garden. Do not touch them unless you have manure in plenty, and mean to take care of them. Nothing but cultivation will make dwarfs a success. CONNECTICUT.

Shad-bush or June-berry as a Pear Stock.

Mr. Charles B. Ott, nurseryman in Bucks Co., Pa., says he has used the June-berry, (*Amelanchier Canadensis*,) for a stock on which to graft the pear, and after 18 years' experience is well satisfied with it for some varieties, while others fail after 10 or 12 years. The Seckel does remarkably well on the amelanchier stock, bearing very fine fruit. Mr. Ott worked his trees four feet from the ground, but would advise budding them close down, as low as on the quince stock. He thinks the native June-berry, (known in New-England, New-York, and Ohio, as shad-bush or shad-blow), has been too much overlooked, both as a stock on which to work the pear, and as a fruit and ornamental tree of itself. The tree, or rather shrub, grows from 15 to 20 feet high, is of graceful form, covered in Spring with handsome flowers of snowy whiteness, hanging in racimes; while the round, purple fruit, nearly as large as the mazzard cherry, is sweet, and not unpleasant to the taste, and very likely susceptible of improvement. As the name indicates, the berries are ripe in June, before other fruit is in eating condition.

For the American Agriculturist.

Transplanting Evergreens from the Forest.

"This," you say, in the *Agriculturist* for April, (p. 102,) "is a somewhat uncertain operation."—So it is as usually practised! The method you propose, I think, would be almost certain to succeed, but it involves the delay of a year, and can be practised only where the trees to be removed stand singly in an open pasture, certainly not where they are found in "the forest."

The Hemlock (*Abies canadensis*), and the common White Pine (*Pinus strobus*), are probably as difficult to manage as any that can be named, and may be taken as representatives of their class; but a little study of their habits will aid us greatly in determining the proper time and also the proper mode of transplanting them!

These trees put forth their shoots only once in the year, and then only at the ends of the twigs where preparation was made the preceding Autumn by the formation of buds. These buds begin to start in the Spring as soon as the weather becomes warm, but in this latitude they make little progress until some time in the month of May, and the growth continues until the middle or last of July. The remainder of the year is required to mature the wood thus formed. This rule seems to be absolute for these two specimens; and you look in vain for the appearance of a shoot or twig not in conformity with it! And the same rule holds in regard to the roots, which put forth their shoots at the same time, and probably in the same manner!

Does not this plainly indicate that the proper season for transplanting these trees is at the time when the shoots are starting, or during the time of their vigorous growth? Does it not as plainly indicate the impropriety of attempting it at any other season? It shows also the absolute necessity of preserving as large a part of the roots unbroken as possible, as it is only from the very ends of the little rootlets that the new ones will make their appearance.

My own experience and observation in this region incline me to believe that the best time for transplanting these evergreens is as late as the first of June or even later. And done at this season, and in a proper manner, they are nearly as certain to live as any other trees! J. J.

Middletown, Conn., April 18, 1862.

Engraved for the American Agriculturist.

Kinds of Fruit—A Botanical Description.

BY T. D. BENNETT.

The organs of a flower are of two kinds (1st,) the *protecting* organs or leaves of the flower, consisting of two circles of leaves, the outer called the *calyx*, the inner the *corolla*. (2nd,) The *essential* organs, which are also of two kinds, *stamens* and *pistils* placed one above or within the other. The stamen consists of two parts, the filaments or stem, and the anther, a case which contains the yellow fertilizing dust, called *pollen*. The pistil is in three parts, (beginning from below,) the *ovary*, a hollow case containing rudimentary seeds called the *ovules*, second the *style*, the tapering part above, third the *stigma*, the tip of the style consisting of loose tissue, upon which the pollen falls, when the ripe anthers open. Referring to the flower (1) in the engraving—(a) is the calyx, (b) corolla, (c) stamens, (d) the pistil, with the ovary showing the ovules within. The pollen upon being discharged from the anthers falls upon the stigma and communicates an influence down the style into the ovary: the ovules thus fertilized become seeds, which ripening, with the ovary, constitute the fruit. Proper fruit then is this ripened ovary called seed-vessel or *pericarp*, containing the seeds. Sometimes the calyx (a) adheres to the ovary and thus becomes a part of the fruit, and even forms the principal bulk of it, as in the apple.

Fruits are divided into simple and multiple. Fruits of the former class consist each of a single ovary, one or many seeded, and are classified as Fleshy fruits, Stone fruits, and Dry fruits, etc.

In FLESHY FRUIT the walls of the ovary thicken and become soft and juicy. The principal kinds of fleshy fruits are the following:

The Berry which is fleshy or pulpy throughout. The grape, gooseberry (3), currant, tomato, etc., are good examples. The orange, the lemon, the shaddock, etc., are berries with leathery rinds.

The Pepo, or *Gourd fruit* (15), is also a sort of berry, externally firm, and internally pulpy. Cucumbers, melons, and squashes are illustrations.

In the *Pome* (2), such as the apple, pear, and quince, the calyx only is thickened, the star-like core in the center is the ripened ovary.

Of STONE FRUITS the most familiar kind is the *Drupe* (11), such as the cherry, plum and peach. In this, the outer part of the ovary becomes fleshy, like a berry, while the inner hardens like a nut. The blackberry and raspberry are composed of a great number of miniature stone fruits, like cherries, upon an elongated *receptacle*, as the end of the flower stalk is called.

In DRY FRUIT, the seed-vessel remains herbaceous in texture, or becomes thin; or else it hardens throughout. Some forms are *indehiscent*, that is, remain closed; others are *dehiscent*, that is, split open at maturity in some regular way. The principal indehiscent kinds are the following:

The *Achenium*, or Akene. This may be mistaken for a naked seed; but it is a ripened ovary, the remains of its stigma being plainly seen. Of this sort is the fruit of the Buttercup (13). The crown on the top of some species of akene fruit is called *Pappus*; in some it represents a cup, in others, scales, as in the sunflower (9); in the thistle, aster, dandelion (6), and hundreds of others it is cut up into a tuft of fine hairs.

The *Utricle* is the same as an akene, with a thin, bladdery pericarp; as seen in the pigweed (12).

A *Caryopsis* or Grain differs from the last by the seed filling out and adhering to the pericarp, so that fruit and seed are in one body; as seen in wheat, Indian corn and other kinds of grain.—A *Nut* is a dry indehiscent fruit, commonly one-celled and one-seeded, with a hard bony wall or shell, such as cocoa-nut, hazlenut and acorn (7).—A *Samara*, or *Key fruit*, is either a nut or an akene, furnished with a wing, like maple keys and seeds of the ash, (17), and elm.—The *Capsule*, or *Pod*, is the general name for dry seed-vessels which split open at maturity. There are several sorts distinguished by particular names. Two have simple pistils, namely:

The *Follicle*, a simple fruit opening as in larkspur, columbine, marsh marigold (5), and the *Legume*, a true pod like the pea (4), this is similar to the follicle only it opens at both sides.

The true *Capsule* is the pod of a compound pistil. The difference between a simple and compound pistil can be seen by comparing the pea (4), and marsh marigold (5), with the triangular fruit of the Iris, or Flower de Luce, (18).

The *Silique* (16), the pod of the mustard family, differs from the legume by having a so-called false partition, to which the seeds are attached.

The *Pyxis* is a pod which opens by a horizontal line, one part forming a lid, as in purslane (10).

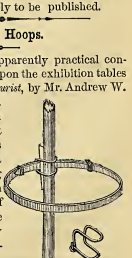
Multiple or *Collective Fruits* are masses of fruit, resulting from several blossoms, aggregated into one body, as the pineapple, mulberry, and fig.

The Strobile or *Cone* is a scaly multiple fruit. The hop is one species where the large scales are bracts; but the name more especially belongs to the pine or fir cone. The scales are *open pistils* overlying each other and pressed together in a spike; 14 is one of these scales of a pine cone.

In this description all the principal kinds of fruit are embraced. Those who may wish a more elaborate description we will refer to Gray's Botanical Text Book. The sketch accompanying is furnished to the *Agriculturist* from a Botanical Plate, probably to be published.

Dahlia Hoops.

A very simple and apparently practical contrivance has been left upon the exhibition tables of the *American Agriculturist*, by Mr. Andrew W. Nicholson, of Brooklyn.



A stout wire is bent in the form shown, so that placing the curved parts of the wire against a plant stake, and passing a barrel hoop through the other looped ends of the wire behind the stake, it may be securely fastened at any elevation on the stake by a wedge placed between the hoop and the stake as represented. The ends of the hoops are secured by two rings of tin or zinc, which allow them to slide freely through, and the hoop thus be enlarged or contracted at pleasure.

Annual Flowers.

We do not wonder at the increasing interest felt in annual flowers. They are the flowers for the million. The seeds for raising them cost but a trifle, many can be got by exchange, or will come as gifts of friendship. And when one gets a good assortment, he can, ordinarily, perpetuate it from year to year without much trouble. Certainly, the work of seed-sowing is less than that of housing bedding-plants through the winter, propagating them by cuttings, potting and repotting, watering, fumigating, and then repotting in the open border. Look at these varieties: Drummond's Phlox, the Double Zinnia, German Stocks, the splendid French Asters, and the new Japan Pinks! The most aristocratic garden would be tame without them. But after all, these and all annual flowers will generally give satisfaction just in proportion to the care that is given them. If sown in hard, barren soil, of course they won't succeed. If huddled together, the matted roots will soon exhaust the ground in which they stand, the leaves and flowers will be imperfect and of short duration. With a few exceptions, annuals should be grown as separate plants, with plenty of room on every side for full development. This needs only to be once tried to convince all gainsayers.

Hints for Lady Florists.

One of the greatest mistakes made in flower-gardens every year, is attempting too much, and crowding the grounds. "My lady" visits several fine gardens, during the Summer, and sees brilliant novelties which she thinks she *must* have next year. Or she gets several nursery catalogues, and reading the high sounding descriptions of plants, she orders more than her garden can well hold, or than she can take care of. The consequence is they fail to do well, and she and her visitors are not satisfied with the effect.

A much better way is, to sit down at the beginning of the Summer, and settle in one's mind how much *room* there will be for new things, and what are, on the whole, the *best*. Get only these, and take the best possible care of them. Give them the right soil, and keep it clean and well stirred. Keep the tall plants neatly tied to stakes. The edgings to the beds should be always well trimmed, the walks clean and hard, and the whole ground neat and tidy. Such a garden will always give satisfaction.

Easy Method of Killing Insects.

For all moths, and beetles that fly at night, use fire to trap them. A fire of shavings, or any thing that will make a blaze, kindled in the evening, will destroy thousands. The more flame the better, if it do not scorch the leaves. A cheaper method still, is to take the half of an old sugar hogshead, or any open vessel, with a broad surface, partially filled with water, and set a lighted glass lantern on a block or stone, in the center of the water at night. The moths are attracted by the lantern and its reflections, and fall into the water. The advantage of the sugar hogshead is, that it serves for a trap by day, as well as by night. For moths that fly by day, we take wide-mouthed glass bottles, half fill them with sweetened water and vinegar, and hang them in the trees, changing the liquid weekly. Thousands of insects are drowned.

"The Hermitage."

On former occasions, we have spoken of the desirableness of creating rustic scenes in pleasure grounds. We now recur to the subject for a special purpose. These wild scenes should not be very near the dwelling, but rather in a retired corner at a distance, where some little touch of natural roughness may be wrought into the artificial creation. Perhaps there is a brook at hand, which can be made to tumble over rocks, into a pool for fish. Along this brook-side, ferns, lilies, and other wild plants may be set. Perhaps there is some spot that can be converted into a *rockery*. Whatever and wherever it may be, let as much as possible be made out of the *natural capabilities* of the place.

To illustrate our ideas, we will describe a rustic scene which has been created in the grounds of a friend, hard by—partly represented in the annexed wood-cut, which we have sketched for the *Agriculturist*. The ground at the left in front of this arbor, is an open, highly finished lawn. The walk which skirts one side of it is kept in fine condition, and a Warwick Vase gives the spot an air of classic elegance. Nothing suggests the idea of rustic wildness. But as the visitor descends a slope in the walk, on the left, he comes among masses of shrubbery, and on turning to the left, suddenly finds himself in the shady arbor shown in our picture. Let us tell how this arbor was made. Six years ago, the proprietor planted fourteen small, low-branched elms around the open space here shown. The second year after, he built a rough arbor of hemlock scantling and slats, just inside of this semi-circle, about ten feet high, and twelve feet in diameter. The trees were then bent over the arched and open roof, and tied down with strong cords. The branches were spread out evenly, like grape-vines on a trellis. In a few years, by pruning and tying in the branches, he covered the arbor with a close network of limbs and twigs, which the summer sun scarcely penetrates. After the branches overhead shall have become more firmly intertwined, he will remove the frame-work, leaving the trees alone to make the arbor as represented.

But the above is not the whole of this Hermitage. For a space of eight or ten feet wide around it, our friend has set all sorts of low bushy trees from the forest, and among them has planted wild vines from the woods. And outside of this, runs a thick screen of arbor-vitæ. The walk, on leaving the arbor, passes into a little woody scene with trees and vines on either side, and arching overhead. Here, and immediately around the arbor, it is attempted to make a miniature wilderness. Throughout the whole of it, the natural soil of the place has been removed, and leaf-mold from the woods brought in. This, with the shade above, furnishes a congenial home for the wild plants, of which there is collected here a large number from the neighboring forests. One or two large bowlders being found on the spot, our friend has hauled in a number more of like character, which now look very much at home. Wild plants and vines clamber lovingly around them. The walk on the right, after winding through a darkly shaded spot, emerges again upon another pleasant open lawn in front of the dwelling.

In the open space of the arbor, seen in the cut, the natural soil has been taken out eighteen inches deep, and the space filled with cobble-stones and gravel, so that the ground is perfectly dry. A few rustic seats are placed in the arbor, which are very agreeable resting-places on a mid-summer noon. The place described, our friend's family style their "Hermitage." They have a separate flower-garden, and ornamental grounds, but nothing which, on the whole, gives them or their guests greater satisfaction with so little labor and cost.

Preserving Fruit—Best and Cheapest Way.

For several years past we have been trying to abolish the old mode of preserving fruits, viz: the addition of pound for pound of sugar, and stewing them down to an indigestible mass in order to make them "keep." Our efforts in this direction have been in a measure successful; the high price of sugar this year will do much towards the adoption of the newer and better mode. All kinds of fruits can be preserved for a year, or more, with the use of little or no sugar, and at the same time retain nearly all of their natural flavor. The process is not more difficult, and is less costly than the stewing process, while the fruit is far more delicious and healthful. The whole operation depends upon simply heating the fruit through, and then keeping it entirely free from the access of air.

Fruit Jars.—Periodically, as the fruit season approaches, there are numerous fruit jar inventions, patented and otherwise, brought before the public with wonderful assurance and an indefinite number of extravagant recommendations. Some seal with

wax, others with India rubber and cast iron; in some the tops are screwed on; in others, wedged; and in others wired. Some tin, some glass, and some stone, but *all* are "perfect," if the claims of the inventors and manufacturers are fully credited. We have tried most of these fruit jars, and while many of them are good, our experience has led us to adopt the cheapest kinds of glass bottles and jars. Tin cans are not safe. While in a majority of cases they may answer well for a season or two, there is always danger of their corrosion, or rusting, and the consequent production of poisonous salts of tin. Besides, it is desirable to have the fruit in transparent vessels so that it can always be examined. Good well-glazed stone-ware bottles and jars are not objectionable on account of corrosion, but they are opaque, so that the contents can not be seen, and are but little cheaper than cheap glass.

During the past year we have kept several bushels of fruit of different kinds, always in good condition, and the portion now unused is almost as fresh and delicious as when first picked. For keeping, we have used all sorts of *glass* bottles and jars, holding from a pint to two quarts each—including several of the patent jars with caps of various patterns. Among these were a dozen glass jars with India rubber rings expanded by a compressing screw, of which five gave way and the fruit was lost. Of the common glass bottle and jars we have not lost one.—There is hardly a glass bottle of whatever form that can not be turned to account for preserving fruits—even junk bottles, soda-water bottles, jars, etc., etc. The *best* form is a wide-mouthed quart bottle or jar, the neck drawn in to give a shoulder for the cork to rest upon. For the larger fruits wide necks are needed; for the smaller, berry fruits, narrow necks answer perfectly.

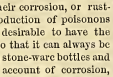


Fig. 1.

Fig. 2.

Fig. 3.

PREPARING THE FRUIT.—Our method is, to put the fruit in a preserving kettle of some kind—a glazed iron kettle, or even a tinned one, or a tin pail will do—and sweeten it with just sugar enough to fit it for the table. The sweetening is added in the form of a syrup made by boiling from one to three pounds of sugar (usually 2 lbs.) with one quart of water. The more juicy fruits, such as strawberries, require less syrup, while pears and quinces require more. The fruit is heated with the syrup just long enough to scald it *through*. Some prefer to use less sweetening and add more when the fruit is to be used. Others use no sugar; they think the fruit keeps just as well, and preserves its aroma better without any sugar. We prefer to use all the sugar that is to be needed, believing that the fruit will probably keep more certainly, and it is then always ready to pour out at once upon the table. The fruit to be preserved should be in good condition—ripe, but not over-ripe, nor containing any decayed portions. Tomatoes are peeled, and then cooked down one-half, as this makes a better sauce, and requires less bottle room.

TO BOTTLE THE FRUIT.—The bottles or jars are thoroughly cleansed, and each one fitted with a stopper. For these, soft corks are best; but they may be made of soft dry wood. For each bottle or jar we provide a little tin "patty-pan," (fig. 1,) costing ½ to 1 cent each by the quantity. Tea-saucers will answer. For *cement* we heat together in an old tin basin or iron kettle, one pound of rosin, and 1¾ to 2 ounces of tallow. This may be mixed in quantity, and melted from time to time as wanted. We formerly used a little over 1 ounce of tallow to one pound of rosin, but further experience is in favor of a softer cement, when the fruit is to stand in a cool cellar.—While the fruit is being heated as above described, the bottles are well warmed by setting them near the fire and frequently turning them; or better, by setting them in cold water in a wash-boiler and heating to the boiling point. The fruit being barely scalded *through*, it is dipped hot into the heated bottles, through a funnel if the bottle necks are small. This is done carefully, so as not to mash the fruit. The bottles are filled up to where the bottom of the stoppers will come; they are then jarred a little to make the air bubbles rise, and more fruit or syrup added if needed. The tops and necks are then wiped clean, inside and out and the stoppers put in, and sunk to a level with the top. The cement being warmed in the mean time, a little is dipped on over the stoppers to close them tightly. The bottles are then turned necks down into the little patty-pans, or saucers, (fig. 2,) and a quantity of cement dropped in to completely enclose the stoppers and necks. When cold the bottles may be set either side up, (fig. 2 or fig. 3). The cooling will shrink the contents so as to create a strong inward pressure, but the patty-pans prevent the stoppers from being pressed in, and the cement shuts out air.

The whole process is simple and quickly performed. After the fruit is prepared, two persons will heat it, and put up 50 to 100 bottles in half a day. We prefer quart bottles as these furnish enough for once opening. If cork stoppers are used, they are rendered soft and pliable, and may be crowded into a small orifice, by first soaking them in hot water.

SUBSTITUTE FOR PATTY-PANS.—The patty-pans are simply circular pieces of tin, stamped in the form of a cup or plate, 3 to 3½ inches across. We buy them at wholesale for 87 cts., or $1.25 per gross. But any kind of cup to hold the wax, will answer. We have seen the common blacking boxes used, bottom for one jar or bottle, and the top or cover for another. Blocks of wood, or bits of board, cut out into cup-form with a gouge, or bored only partway through with a large augur, answer every purpose. They should be partly filled with cement, before turning the bottle into them. No one need look far for the materials. The old bottles about the house, thoroughly cleaned, the tin boxes, or old saucers, or wooden blocks, and some rosin are all the apparatus needed.

Fig. 4.

ANOTHER METHOD.

An associate editor of the *Agriculturist*, who has successfully practiced the general method above described, recommends a substitute for the stoppers and patty pans, which he has used for some years, and successfully. Pieces of Canton flannel are dipped in heated grafting wax made by melting together 2 parts bees wax, 2 parts rosin, and 1 part tallow. After dipping they are laid, cotton side up, upon sheets of rather light, white printing paper, on a smooth table and additional wax laid on, and the air bubbles rubbed out if necessary. The cloth must be perfectly saturated with the wax, but a large quantity is undesirable. Glass jars are used with a so that the waxed cloth may be conveniently bound on. They are hot, when filled full, with the boiling hot preserves; the prepared cloth is cut into convenient squares of generous dimensions; and the jars or bottles are jarred a little, repeatedly, to force the escape of any air bubbles. The cloth caps being slightly warm are laid, wax down, upon the mouths, and the hand passed over the rims with a firm pressure; then with a stout cord or packthread wound round and round, the edges of the caps are bound down upon the neck of the bottle or jar. As soon as the bottles cool, a depression of the cap will indicate that they are airtight, while the least hole will prevent this concavity, and thus indicate at once the necessity of repeating the sealing process. Should the fruit ferment an inflation of the cap will be noticed, provided the jar is tight.

Washing Machines.

The hard work of "Washing-day" has led to much effort on the part of inventors, to supply some kind of labor-saving machines to lessen the toil of the house-wife. The amount of ingenuity exercised in this particular direction has been so great, that there are now in the Patent Office at Washington, more than *eight hundred* models of patented washing machines, we believe. Yet, notwithstanding their great number, and the amount of advertising and other efforts to bring these machines before the public, in how very few families is there now a washing machine in actual use. There are plenty of them lying unused in the garrets or outhouses—the strongest evidence that, however good in theory, few of these machines stand the practical test. We have tried a score of them, yet all but two have been thrown aside after a patient effort to make them work profitably. The "Metropolitan," with its sixteen spring pestles, working upon a spring pole, is almost perfect, at least it does the work well without injuring the garments. The "help" complain that it is "hard to work"—but they are "constitutionally" opposed to all Yankee machinery, and we do not attach much importance to their complaints. The other, the "Nonpareil Washing Machine," we have now had in use for several months and it has stood the test of actual trial quite as well as any machine we had previously sent home. It is somewhat like the old-fashioned "fulling mill," and certainly "beats out the dirt" without damage to the garments. It is operated by a crank and has a heavy balance wheel which equalizes the force so as to make it work quite easily. On the whole, we are much pleased with it.

For the American Agriculturist.

Making Double-Curded Cheeses.

Many farmer's wives despair of making this great luxury, to say the least, because they have not cows enough. Some years ago, when we first commenced farming, I made very good cheese from six cows, by making them "double-curded." During the first half of June, milk will generally keep sweet, (in a cool place), 36 hours, so that two days' milk can be run up into one curd. To keep the curd over, it must be well drained off in a cheese basket; a coarse linen cloth is the best to wrap around the curd, and a board and weight should be laid on top to press out the whey, after which it may be hung up in the cellar, or in a cool pantry, until wanted. While our second curd is getting ready, we have our first cut up in small pieces of the size of kernels of corn and soaking in lukewarm water, to take out the sourness; a second water too is generally necessary. We find by experience that each of the two curds had better be scalded by itself, as they *run* together when scalded in one vessel. After salting and partial cooling, they can be mixed while putting into the hoop without any such result, and quite just as well, and taste as well, as a single curded cheese. MRS. M. J. S.

Fairhaven, Ill.

A Novel "Pumpkin Pie."

A NEW-JERSEY BACHELOR KEEPING HOUSE.

DEAR EDITORS:—I suppose you will not object to my talking with the good housewives who read the *American Agriculturist*. As I am a bachelor and must necessarily meddle with the household affairs, I deem it serviceable to study the mysteries of housekeeping. Some friends call me "Pot Betsy," and my fair city cousins think me over nice and fussy. Of course I don't care for what they say (?), and am very glad *this* house is comfortable and attractive enough to lure my most fastidious city friends to come and visit me. Pray, madams, don't think that

I do all the delicate work, for I employ my farmer's tidy wife, here. Now you know what I am, and will, I trust, allow me to tell you about a mysterious pie.

Yesterday I sat down *alone* with my venerable father at dinner, and noticed a nice *pumpkin* pie on the table. I was really surprised, because I was sure there was not a pumpkin in the house. We tasted it, and declared it to be made of pumpkins, but wondered where the housekeeper got them, and after dinner I asked her. She laughed and said it was made of turnips.—Turnips? Yes. I proposed to render her name famous by asking her recipe to be published in the *Agriculturist*, she smiled, pouted, and went out. Here is the recipe: "Take two good sized yellow turnips; clean and peel them; boil about two hours and mash them. Then add 1 pound of brown sugar, 4 eggs, 2 quarts of milk, ½ cup of molasses, 1 spoonful of ginger, 1 nutmeg, ½ cup of wheat flour. This is then used the same as in making the real pumpkin, or custard pies. MRS. L. E. VAIL." A word more from the Bachelor.

A BEEF'S HEART.

The other day I ordered a beef's heart to be cooked according to a part of the recipe of "H." of Genesee Co., Mich., (in the March *Agriculturist*) and part of that of J. Langdon, Vinton Co., O., in the same paper: as follows: "Gash it, and fill it with beef suet, bread, eggs, parsley, nutmeg, pepper and salt, and boil it." Can I consider this compounded recipe my own? It is very excellent, and I, an old customer of Delmonico, would be quite willing to pay 40 cents per plate for it. J. H. R.
Passaic Co., New-Jersey.

Rhubarb Wine.

A fair article of wine for family use may be made from the juice of the rhubarb in the following manner: Grind or mash, and press the stalks, in any convenient manner. A portable or hand cider mill and press answer well for this purpose. Add as much water as there is juice, and 3 to 4 lbs. light colored sugar to each gallon of the mixture. Put in casks and set in the cellar, with the bung out, leaving it until fermentation ceases, keeping the casks *full* in the mean time. When done working, bung up tight or bottle for use. Small quantities may be put at first into glass bottles or stone jugs.

Double Heeled Socks.

An anonymous correspondent, referring to our engravings and directions, in the Dec. *Agriculturist*, for knitting socks for Soldiers and others, writes: "Would it not be better to make double heels? This is easily done by knitting a stitch and slipping a stitch on the wrong side, and knitting every stitch on the right side."

A Cat's Tenacity of Life.

Cats sometimes seem to have a wonderful hold on life, so much so that the "nine lives of a cat" has passed into a proverb. Mrs. O. G. N. of Black Earth, Wis., gives the following in a note to the *Agriculturist*:

"Our old cat was the pet of the family. When we resided in Rochester, on the banks of the Genesee, one Winter pussy began to grow cross, and from some unaccountable reason, her *good natured fits* became "small by degrees, and beautifully less," until we were in danger of getting roundly scratched if we meddled with her ladyship in the least. My mother finally induced me to part with my pet, and the boys carried her in a bag to the bridge which spanned the Genesee, just above the falls. They "*let the cat out of the bag*," and saw her take the perilous descent over the small fall, just above the main fall, over which she must also have plunged, in imitation of unfortunate Sam Patch. After *ten* days pussy came home, and begged to come in. I was fairly afraid of her at first—thought it might be her *spirit*, but I assure you she was tame enough ever after. She fairly earned her title to the tenth life, which the icy waves had spared.

June.

BY JAMES RUSSELL LOWELL.

"And what is so rare as a day in June?
Then, if ever, come perfect days;
Then Heaven tries the earth if it be in tune,
And over it softly her warm ear lays;
Whether we look, or whether we listen,
We hear life murmur, or see it glisten;
Every clod feels a stir of might,
An instinct within it that reaches and towers,
And, grasping blindly above it for light,
Climbs to a soul in grass and flowers;—
The flush of life may well be seen
Thrilling back over hills and valleys;
The cowslip startles in meadows green,
The buttercup catches the sun in the chalice,
And there's never a leaf or a blade too mean
To be some happy creature's palace;
The little bird sits at his door in the sun,
Atilt like a blossom among the leaves,
And lets his illumined being o'errun
With the deluge of Summer it receives;
His mate feels the eggs beneath her wings,
And the heart in her dumb breast flutters and sings;
He sings to the wide world, and she to her nest,—
In the blue ear of Nature which song is the best?

Now is the high-tide of the year,
And whatever of life hath ebbed away
Comes flooding back, with a ripply cheer,
Into every bare inlet and creek and bay;
Now the heart is so full that a drop overfills it,
We are happy now because God wills it;
No matter how barren the past may have been,
'Tis enough for us now that the leaves are green:
We sail in the warm shade and feel right well
How the sap creeps up and the blossoms swell;
We may shut our eyes, but we can not help knowing
That skies are clear and grass is growing;—
The breeze comes whispering in our ear,
That dandelions are blossoming near,
That maize has sprouted, that streams are flowing,
That the river is bluer than the sky,
That the robin is plastering his house hard by;
And if the breeze kept the good news back,
For other couriers we should not lack;
We could guess it all by yon heifer's lowing,—
And hark! how clear bold chanticleer,
Warned with the new morn of the year,
Tells all in his lusty crowing!

Joy comes, grief goes, we know not how;
Everything is happy now,
Everything is upward striving;
'Tis as easy now for the heart to be true
As for grass to be green or skies to be blue,—
'Tis the natural way of living:
Who knows whither the clouds have fled?
In the unscarred heaven they leave no wake;
And the eyes forget the tears they have shed,
The heart forgets its sorrow and ache;
The soul partakes the season's youth,
And the sulphurous rifts of passion and woe
Lie deep 'neath a silence pure and smooth,
Like burnt-out craters healed with snow."

The Editor with his Young Readers.

Something about Chemistry.....II.

(*Continued from page* 153.)

Almost every thing that has yet been found in the world, has been examined by chemists to ascertain whether it is a *simple* or a *compound* body, and if a compound body, to find what simple bodies or elements enter into its composition. The process by which the chemist examines the composition of any substance is called *analysis*." To analyze a soil, for example, is to separate it into its parts, and find what the parts are, and how much there is of each—to find how much sand, how much lime, how much potash, how much iron, etc., there is in every hundred ounces, or pounds, of the soil. Please remember then, that in chemistry, *analysis* means examining a substance to find what it is made of. Thus: to analyze a piece of cake, we might by a chemical process get out the sugar by itself, the flour by itself, the water, milk, eggs, etc., each by itself. The chemist can even go further, and find what *simple elements* make up the sugar, the flour, etc. Suppose we take a dozen different kinds of cake, and analyze them all. In the first, second, third, indeed in all of them, we should probably find much flour and sugar, and some water, butter or fat, eggs, with a small proportion of spices, etc. With the same few kinds of elements the housewife will make perhaps a hundred kinds of cake, all of which will be different from each other in form or color, or texture, or taste. These differences are produced *by using different proportions of the same ingredients*, (flour, sugar, water, spices, etc.) or by omitting one or more of the spices, or by mixing and baking them in a different manner.—Just so, in the making up of the millions of trees, plants, leaves and flowers, bodies of animals, rocks, soils, etc., only a few simple elements are found. They are put together in different proportions, or combined in a different manner. Indeed, you may gather all the plants that ever grew, all the animals in existence, the great bulk of all the soils we cultivate, all the air and all the water on the earth's surface, and set the chemists to work upon them, or on portions of each, and they will be able to find in them *only about fifteen simple elements!*

Even more wonderful still, over half of the weight of all these substances, including the rocks and soils, will be found to consist of only one single element! Let us now look a little at

THE ELEMENTARY BODIES.—About fifty of the elements are METALS, such as Iron, Manganese, Copper, Lead, Tin, Zinc, Gold, Silver, Platinum, Cobalt, Bismuth, Antimony, Mercury, Sodium, Potassium, Aluminum, and over thirty others which are only found in small quantities. Then we have a few other *elements* which are seen either in solid or liquid form, or both, such as Sulphur or Brimstone, Arsenic, Carbon (or Charcoal), Phosphorus, Chlorine, Iodine, Bromine, etc.—Finally, we have three which can never be *seen*, because when in a pure uncombined state, they are transparent gasses, or air-like substances. The names of these three substances are: OXYGEN, HYDROGEN, and NITROGEN—pronounced Ox'-y-gen, Hy'-dro-gen, and Ni'-tro-gen. These are very important elements, and you should not be afraid of their names, but learn them, and try to understand something about them. We said that when they are *pure*, or not combined with any thing else, they naturally assume a gas or air-like, transparent form. But the first two, Oxygen and Hydrogen, have strong attachments, (are very affectionate,) and they are always found united with one another, or with something else, and then then they may be in a solid form like ice; or in a liquid form like water; or in a gaseous form like the water in its invisible state as it floats unseen in the air.

When one quart of pure *oxygen*, and two quarts of pure *hydrogen* unite, they condense and form a little drop of *water* which is simply a *compound* of these two elements.

When one quart of pure *oxygen* is mixed with four quarts of pure *nitrogen*, they form five quarts of pure *air* which is a mixture of these two elements.

When a little lump of pure black charcoal (*carbon*) is joined with some pure *oxygen* gas, by burning, the two unite and form an air-like, transparent or invisible substance called *carbonic acid*. It is this same compound gas (carbonic acid) that bubbles up in soda water, or in beer; and it is this same air-like substance that swells out in the thousand little holes in light raised bread. The chemist can catch the carbonic acid gas (not air) in the holes of the light bread, and by some of his peculiar processes, he can get a quantity of pure black carbon (charcoal) out of it, and also some pure oxygen.

You now know that water is made up of *oxygen* and *hydrogen*; also, that *iron* is one of the *elements*. Now when you moisten a piece of iron with water, and let it lie awhile, the iron unites with the *oxygen*, taking it away from the *hydrogen*, and forming iron rust, which is a reddish compound made up of iron and oxygen. The chemist calls it "*oxide of iron*," that is, oxygen united to iron. (This oxide of iron is what gives the reddish color to our soils.) But when the iron takes away the oxygen from the hydrogen in the water, the hydrogen does not seem to like to be left alone, and so it grasps hold of some of the nitrogen in the air, and forms another new compound called *ammonia* (harts-horn), which is also a gas or air-like substance, that has a strong pungent odor, such as you perceive in smelling bottles, or in the horse stables, or manure heap, etc. It appears strange that one of the elements of pure water united to one of the elements of pure air, should produce such a strong smelling, choking substance as ammonia; yet such is the case, and this is only one of the ten thousand strange things that chemistry reveals. Still further: the ammonia thus produced by the iron rusting in the water, as fast as it is produced, flies away into the air, and some of it is caught in the little mouths on the leaves of plants, and other portions of it are washed down into the soil by rain and dew, where it is taken up by the roots and carried into the plants, to nourish them. (Our young readers who live on the farm, well know that the best manures or fertilizers to feed plants with, are those which contain most of this pungent ammonia, such as horse-stable manure, Peruvian guano, etc.) Ammonia is produced in a great many other ways, besides the rusting of iron.

Wood contains a good deal of the element *carbon*, or charcoal. A stick heated in a close vessel, or covered up with earth to keep out air, loses its other elements, and we have left a large mass of coal, which is nearly pure carbon. Hard coal, sometimes called stone coal, from its stony hardness, is nearly pure carbon, but not quite so pure as charcoal. When we burn wood, or charcoal, or stone coal, in a stove or grate, the oxygen of the air leaves the nitrogen and unites with the atoms of carbon in the wood or coal, and then we have some of the carbonic acid we told you of above, and this goes off into the chimney unseen, just as it rises from the soda water, or exists in the bread, unseen. After a time the whole of the wood is consumed, as we say; that is, it has been pulled to pieces, and its *elements* have gone off in different forms. Why! a whole cord of wood, or a ton of hard coal, soon escapes through the chimney in its new form, and we are not able to see it go. We see a cloud of smoke, which is only the watery vapor, except when the draft

PRAYER—By A FRENCH ARTIST.—*Engraved for the American Agriculturist.*

"Now I lay Me—"

Surely this lovely picture needs no words of explanation or description. It tells its own simple story of piety and divine grace in the heart. "Our Father which art in Heaven," bows his ear to hear the low sweet voice of the prayer by which the child, in offering its own petitions, bears the mother's heart heavenward in holy aspiration. Ruskin, the great art critic, writing of the original, at one time on exhibition at the Royal Academy, directs attention to "The little bare feet keyed from the cold stone by the garment folded under them, bared of their rough grey stockings, as reverently and surely in God's presence as if the poor cottage floor were the rock of Sinai; the close cap over the sweet, pointed, playful waving hair which the field-winds have tossed and tumbled as they do the long meadow grass in May, and yet have not unsmoothed one wave of its silken balm, nor vexed with rude entangling one fair thread of all that her God numbers day by day. The dear, bowed patient face and hands folded, and the mother's love that clasps them close in a solemn awe, lest they should part or move before her Father's blessing had been given in fullness. Return to it, and still return. It should be the last picture you look at in all the year; carrying the memory of it with you far away through the silence of thatched villages and the voices of the blossoming fields." Sweet will be their slumber, and refreshing as dew from heaven to the ever greatful meadows; and under the influence of this simple confidence in God, of such guileless hearts, their souls will grow in all grace and loveliness, as the meadows respond to the dews, and rains, and sunshine.—We trust there is not one of our dear young readers, who lives a prayerless life; not one who walks upon this beautiful flower-clad earth without often lifting the heart in thankfulness to the Giver of all good; not one that rises in the morning without kneeling to express gratitude for protection and crave divine aid for the right performance of the duties of the day; not one who lies down at night without asking forgiveness for sins and follies, and for the guardian care of the ever-watchful Eye during the night. It is not childish to pray; it is noble, it is manly, it is Christ-like.

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carries up some unburned charcoal dust which gives a dark color to the smoke. Chemistry tells why so much heat is given out while the carbon is uniting with the oxygen, but perhaps you can not understand that now. The invisible carbonic acid, (made of the carbon of wood, and oxygen of the air) floats off and is gradually absorbed by the leaves and roots of trees and plants, and the carbon again forms new wood. These changes are very interesting, and we shall learn of many more, equally wonderful.

The whole world is full of these changes, this destruction of old compounds, and the formation of new ones; the breaking up of the new compounds again, and the formation of others. All visible changes going on—such as the growth of plants and of our bodies, the burning of fuel, the oxydation of iron ore (which is an iron rust, or oxide of iron) into pure iron and oxygen, the manufacture of soda out of salt, the change of flour to bread, the change of bread and meat and other food into blood, and the changing of blood into lean flesh and fat and bones and hair, etc., the changing of hay and grass into the cow's blood, and the changing of her blood into pure sweet milk, the burning and disappearance of the oil or fluid in the lamp, the changing of old cotton rags into pure sweet sugar, and ten thousand other changes of form and substance—all these are directly due to the destruction of one kind of compound bodies, and the formation of new compound bodies out of the *elements* thus set at liberty.

As we have already told you, there are but few elements, but they are united in an infinite number of ways to produce the multitude of things we see. Yet they do not get mixed up at hap-hazard. These elements are governed by certain laws. They have certain *likes* and *dislikes* among themselves, and they follow their stronger inclinations when allowed to do so freely, and it is on account of these likes and dislikes, (their *affinities* as the chemist calls them,) that they are constantly changing. Now, two or more cling together in one compound body; now one of them flies off to something it likes better, and there is a breaking up of old groups (compounds,) and the formation of new ones entirely different; and so the changes go on. The chemist studies out these attachments among the elements (that is, their affinities), and the circumstances which favor the breaking up of groups, and the production of new ones, and he is thus able to control the *elements* themselves, and cause them to do his bidding. He knows, for example, that soda has *some* liking for the volatile carbonic acid gas, and that it holds it fast, making the compound called cooking soda. But he also knows that the soda likes vinegar better than it does carbonic acid. So he puts some soda into a tumbler of water, and pours in a little vinegar. The soda at once quits its partner carbonic acid, and goes to the vinegar, making a new compound. Then, the carbonic acid, being left alone, comes bubbling up through the water, as if in a rage, and flies off in its own proper gas or air-like form, and flies away in search of something else to join hands with. If there chanced to be on the tumbler some freshly burned lime, the carbonic acid would join it, and then we should have a new compound, a real white chalk.

Chemistry is, indeed, a wonderful study—full of interest, and of great usefulness to every body, and we advise every one of our young readers, at least, to learn all they can about it. We will, as we have time and room, try to give an occasional easy and interesting lesson. Please read over and over again, very carefully, these two lessons already given, and try to understand and remember them.

READ THE CHAPTERS ON CHEMISTRY.—They will require some study and thought, but this should not be an objection. That which costs us nothing, is generally worth little or nothing.—The subject will grow more and more interesting, *if* you understand it *all* as we go along.

VALUABLE RECIPES.—For preserving the complexion, *temperance*; for whitening the hands, *honesty*; to remove stains, *repentance*; to improve the sight, *observation*; to improve the voice, *civility*; to keep away moths, *industry*.

Blessed is that man or woman that can let drop all the bars and flabbies, instead of picking them up and fastening them on to the next passenger. Would we only let the vexing and malicious sayings die, how fast the lacerated and scandal-ridden world would get healed and tranquilized. DR. HUNTINGTON.

A good man, who has seen much of the world, and is not tired of it, says: "The grand essentials to happiness in this life are: *something to do, something to love,* and *something to hope for.*"

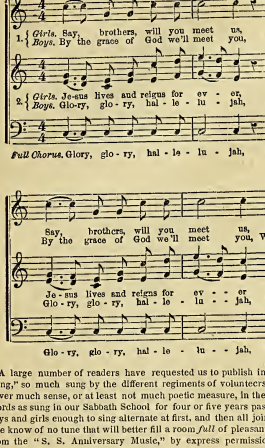
Many a man has missed being a great man, by splitting into two middling ones. Concentrate your energies in one direction if you would make a figure in the world.

If a man cheats you, cease dealing with him; if he is abusive, quit his company; if he slanders you, always take good care to live so that nobody will believe him.

Fame is like an eel—hard to catch, and harder to hold.

BROTHERS, WILL YOU MEET US

Arranged by FRANKLIN H. LUMMUS.



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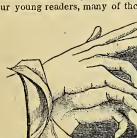
A large number of readers have requested us to publish in the *Agriculturist* what is called the "John Brown Song," so much sung by the different regiments of volunteers. We have heard it frequently, but could never discover much sense, or at least not much poetic measure, in the words. The *tune* itself is given above, but set to the words as sung in our Sabbath School for four or five years past; and very fine music it is, especially when there are boys and girls enough to sing alternate at first, and then all join in a full chorus. All may sing it together, however. We know of no tune that will better fill a room *full* of pleasant melody. [The notes, as above arranged, are taken from the "S. S. Anniversary Music," by express permission of Mr. G. S. Scofield, who owns the copy-right.]

Shadows on the Wall.

The Shadow Pictures already printed have given much pleasure, and so we continue the series. These all require considerable patience and ingenuity, but we think our young readers, many of them at least, will be successful as we have been. "Piggy" is rather hard for some hands, but others will make it very easily. In forming these shadow pictures, the hands should not always be placed so that the light will fall full and square upon them, but a little turn to one side or the other, will often very much change the effect. The Shadow should,



THE GOAT.

PIGGY.

however, ordinarily fall square upon the wall, that is, the lamp must be placed so that the light will fall at right angles to that part of the wall where the shadow is made. Besides, it is not at all necessary to have the fingers close together, by spreading them apart the shadows will often be improved.

THE ARAB'S PRAYER.—"O God, be kind to the wicked; to the good thou hast already been sufficiently kind in making them good."

Always take the part of an absent person who is censured in company, so far as truth and propriety will allow.

Answers to Problems.

Answer to rebus No. 4, April *Agriculturist*, p. 119.—*A wise man sometimes changes his opinions; a fool never.*

Answer to No. 5, April *Agriculturist*, p. 119.—*Our national resources are developed by earnest culture of the arts of peace*—(Hour gnat-eye-on-ale re-sour-ces ar-e developed by ear nest cul chewer pd-fe arts of peas.)

Answer to No. 6.—"*Seest thou a man diligent in his business?—he shall stand before kings; he shall not stand before mean men.* [In the rebus, a man diligent in his business is represented as standing before kings, and again *behind* (not before) men shooting little birds. What meaner men than such are there?]

No. 7. *The Block Puzzle* in April *Agriculturist*, p. 119, is done as shown by the above diagram.

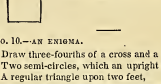
Correct answers to puzzles have been received from: S. Sibly Hopkins, 4 and 6; Jerry M. Cochran, 6; S. and J. F. Mills, 4; R. F. Roberts, 4; Lansing L. Porter, 6 and 7; Oliver Combs, 4 and 6; N. W. Johnson, Jr., 5, 6 and 7; Chas. B. Warkwick, 7; Ida, 4 and 6; Luke Robinson, 7, C. Adams, 5, 6 and 7; Irenæus N. Kneeland, 4, 6 and 7; R. W. Weeks, 4, 5, 6 and 7; F. W. M., 4 and 6; E. H. Park, 4, 6 and 7; Maggie Darling, 6 and 7; Mattie Drennan, 7; Amanda Rogers, 6; Jarvis H. Arnold, 4 and 6; J. M. Garretson, 7; I. R. Smith, 4, 6 and 7; Henry F. Miles, 4, 5, 6 and 7; Katie M. Humphrey, 4, 5 and 6; C. L. and A. C. Selwers, 3; F. C. A., 6; L. Harrison's boys, 7; D. B. Rogers, 7; Simeon H. Batterson, 4, 5, 6, 7.

CONUNDRUMS are often most enjoyed when the answers are given at the same time. Master Frank Fargo writes: "I have a pair of pigeons—why are they like a shiftless farmer? *Ans.* Because they'll prop-a-gate until its fall. When is a farmer like "Old Uncle Ned?" *Ans.* When he loses his hair, (h) (harrow.)"

New Problems.

No. 8. This is another rebus founded on a passage of Scripture;—very easy to guess, we think.

No. 9. *Another Block Puzzle.*—Take twelve pieces of block or card, like the following, four of each kind, and place them together to form a perfect square.



No. 10.—AN ENIGMA.

Draw three-fourths of a cross and a circle next,
Two semi-circles, which an upright meet,
A regular triangle upon two feet,
Two semi-circles and a circle complete,
Which, if well done, the source will show
Of a little "solace," and much harm, too.

The Game of Solitaire.

"Buckeye Boy" sends to the boys who read the *Agriculturist* a puzzle, which is the old game of "Solitaire" played with pegs or checker-men. He directs to check off a square in twenty-five smaller squares or checks, upon a slate, paper, or board, and to place twenty-four buttons, one on each square, except the middle one; then by "jumping" one at a time, in any direction, except cornerwise, and taking off the one jumped over, to remove *all* the buttons except one. The best arrangement for this very pleasant game is with the use of a light piece of board, in which holes are bored, pegs being used instead of buttons. On the under side of the board a piece of broadcloth, or nice leather, may be tacked, to serve as a pocket to hold the pegs. The plan proposed requiring only twenty-four men, is quite simple; but if it is desired by any one to play a harder game, and one requiring more thought, it may be done by adding places for more men.

The Russian Locust War.

Translated for the American Agriculturist, from the German of DR. OTTO UHR.

"Continental papers contained, during the last few years, frightful accounts of the destruction done by the locust. In Bessarabia, these animals covered an area of 128,000 acres with their eggs; in the Chersonesus and Taurie Government, twice that space was occupied. All possible means were resorted to to kill these eggs, such as digging, collecting and burying and burning them, plowing the ground and tramping it hard with horses and cattle. On one piece of land of 1,100 acres near Chotim, not less than 4,400 bushels of locust eggs were collected. About the first of May, when the eggs began to hatch, rollers and harrows were brought into requisition, but all to no avail. Toward the last of July this pest passed beyond Bender on the Dniester, in a width of 8 miles, and in a mass from 7 to 8 inches thick, and crossing the river within 2 days, they spread themselves along the low lands of the opposite shore. Here it was that a battle was fought such as the records of Natural History can show no parallel to—men of all nationalities gathered to defend their homesteads, and in a short time 1,400 men stood in arms against the destroyer. Meanwhile the locust had spread over an extent of 16 square miles. To prevent them from attacking the surrounding fields, deep ditches 24 to 29 miles long were dug, and men placed along these ditches to kill the locusts dropping into them. Others fought them with bush-harrows and brooms in those places where ditches could not be made. Where the ground was clean, hordes of horses and cattle were driven along to crush them. Pickets on horseback were stationed to watch the movements of the enemy breaking through the ranks. Eight days were thus occupied. Three quarters of the locusts were destroyed, when the remainder had completed their last change and became winged insects: on the 9th of July, the first swarms rose into the air and flew in different directions. The battle was not fought in vain. While in the Province of Chersonesus, nearly the whole crop was destroyed, Bessarabia suffered but very little."—*What a lesson for the American farmer!* If we do not have the Egyptian locust, or the large locust, we have certainly other pests liable to become just as great. Not many miles from where we write, we have seen clover fields and Hungarian grass extensively destroyed by the common grasshopper, and the ravages of the Army worms and other insects are fresh in all our memories.

Reports on Crops, May 10, 1862.

(*See General Remarks on page* 168, *and Notes to Crop Reporters on page* 164.)

EXPLANATIONS TO THE READER.

(Full details are given on the Blank Forms furnished to Reporters.)

The First Column gives the principal Counties from which the reports come. In many cases, however, the territory reported from extends over on to adjacent counties, and the figures in reality apply to a larger territory than the county named.

The Second Column gives the number of persons in each county or locality, the average of whose opinions are embraced in the single rows of figures, standing opposite in the same line. In several cases a whole County is represented by an officer of the Agricultural Society, who gives the summary of reports from assistants in each of the towns. *m* indicates that a large but indefinite number of persons joined in making the report.

The Third Column gives the names of the persons who received and distributed blanks, and collected and forwarded returns.

☞ *In all the reports the numeral* **10** *is taken as the* UNIT *or average for comparison*, thus:

Column A—10 means that the weather for a month previous to the date of the report was about as good as the average for other years, that is for Winter crops and for general farm operations. The state of the weather as it has affected the grass crop, is not taken into account. Figures above or below **10** indicate the comparative goodness or badness of the weather.

Columns—B—E—H—In these **10** indicates that the amount of surface growing is about the same as *last year*. Each figure (or unit) above **10** means a tenth more of surface. and each unit below **10**, means one-tenth less. Thus, **5** means one-half of average surface—**15** means one and a half—**20** means double, and so on.

Columns C—F—I—L—N—P—S—In these columns **10** means that the average surface sown or planted or growing is about the same as the average for five years past. Each unit above or below **10** stands for an increase or decrease of one-tenth in the surface.

Columns D—G—K—M—O—R—T—U—V—In these columns **10** means that the *condition* and *prospect* on May 10th indicated an *average yield per acre*. Here also each unit above or below ten indicates the prospect of a yield a tenth above or a tenth below the average ; thus, a half crop is indicated by **5**—a double crop by **20.** Some report fruit prospects at **100** to **300**, meaning that the promise is for ten to thirty times the average crop in the localities named.

Blanks in a column indicate that little or none of the crop is grown, or that it is too early to report upon it, or that the reporter could not estimate satisfactorily to himself.

Registered No.	County and number of persons reporting from each.		Persons gathering and sending the reports.	Weather.	Wint'r Wheat: Surface vs. 1861.	Wint'r Wheat: Surface vs. av'ge.	Wint'r Wheat: Prospects at date.	Spri'g Wheat: Surface vs. 1861.	Spri'g Wheat: Surface vs. av'ge.	Spri'g Wheat: Prospects at date.	Corn: Surface vs. 1861.	Corn: Surface vs. av'ge.	Corn: Prospects at date.	Rye: Surface vs. av'ge.	Rye: Prospects at date.	Oat: Surface vs. av'ge.	Oat: Prospects at date.	Hay: Surface vs. av'ge.	Hay: Prospects at date.	Potatos: Surface vs. av'ge.	Potatos: Prospects at date.	Fruit: Apples.	Fruit: Peaches.
				A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	R	S	T	U	V
	OHIO.																						
1	Washington..	3	A. J. Hart......	8	12	10	15	.	..	..	..	..	.	12	10	10	6	10	12	5	..	15	15
2	Auglaize	1	Samuel Craig...	10	12	12	12	..	..	..	..	..	8	10	10	11	9	13	10	.	10	100	100
3	Miami......	16	Euoch Jones....	8	11	12	12	..	..	..	..	..	..	10	10	7	9	10	10	..	..	15	25
4	Trumbull....	1	L. P. Andrews.	25	10	10	30	20	45	12	..	..	..	2	10	20	8	..	..	..	..	30	50
5	Huron	3	C. B. Simmons.	9	11	12	12	10	11	10	..	..	..	10	10	..	..	10	9	10	.	..	..
6	Crawford....	1	D. Robertson, jr.	9	10	11	15	20	15	10	..	..	..	..	..	10	10	..	..	..	..	20	15
7	Ashtabula.,	12	J. W. Kennedy..	5	15	20	15	10	15	..	..	..	..	10	15	20	..	10	..	10	..	20	20
8	Licking... ..	1	G. W. Peuny....	15	12	12	15	..	..	..	12	12	..	..	..	8	10	10	12	10	10	15	20
9	Portage	6	H. G. Spooner..	10	10	8	20	12	20	10	..	..	..	..	..	12	10	12	9	..	..	20	20
10	Stark	12	Jacob Hall......	12	12	10	12	20	30	10	10	..	..	..	..	9	10	10	11	11	.	13	20
11	Paulding....	8	G. N. Goochin..	5	15	12	10	..	..	..	..	..	..	..	..	5	..	15	10	.	.	10	15
12	Jackson ...	21	D. Mackley.. ...	10	12	15	15	..	..	..	..	..	..	..	..	7	.	10	13	10	..	15	20
13	Richland ...	1	Joel Myers......	10	12	12	14	..	..	..	13	13	..	10	14	8	8	10	11	10	..	25	50
14	Fairfield	5	Thomas Cole....	10	12	..	15	..	..	..	..	10	..	..	..	8	5	..	8	..	..	16	20
15	Wyandot....	1	J. D. Sears......	10	10	13	12	..	..	..	..	..	..	10	12	8	7	14	12	..	..	20	20
16	Portage......	1	Homer Mills....	8	12	10	15	..	..	..	..	..	..	10	10	10	10	10	8	12	..	12	12
17	Ashland	4	R. M. Close.....	11	12	12	10	14	15	10	..	..	..	10	9	7	10	10	8	..	..	20	20
18	Wayne	17	J. A. Brown....	7	11	14	15	..	..	..	..	..	..	..	..	10	9	10	12	10	..	25	40
19	Coshocton...	7	J. B. Burt.......	12	14	12	15	..	..	..	..	..	..	8	10	9	10	10	10	11	10	20	20
20	Tuscarawas..	1	A. O. Miksch...	10	12	13	15	..	..	..	12	13	..	..	..	10	..	10	10	10	..	20	20
21	Erie	2	DeL. C. Ransom	8	13	11	12	15	20	10	..	..	..	10	10	8	10	9	12	10	..	10	200
22	Washington..	1	C. F. Hayward..	6	13	20	20	..	..	..	7	3	..	..	..	..	..	10	8	9	..	25	20
23	Morgan......	1	Wm. Millious...	8	12	10	10	10	5	8	10	..	..	..	..	8	10	10	10	8	..	12	5
	INDIANA.																						
51	Benton......	2	D. Campbell....	10	14	30	10	10	3	10	..	..	..	8	10	4	6	15	10	..	..	12	..
52	Jay	3	Peter Walter ...	9	11	12	14	..	..	..	..	..	..	..	..	8	..	12	13	..	..	12	15
53	Hendricks....	7	A. Whitenack ..	9	11	16	12	..	..	..	..	..	..	..	..	10	7	11	13	..	..	14	16
54	Knox..	5	Joel Wampler..	5	12	..	11	..	..	..	9	..	..	10	..	5	..	..	10	..	..	10	..
55	Randolph....	11	C. G. Prickett...	9	10	13	15	..	..	..	..	..	..	..	..	8	5	10	13	..	..	20	30
56	Henry.......	17	T. B. Redding ..	8	12	15	14	..	..	..	10	..	..	..	..	5	10	12	12	..	..	14	15
57	Henry.......	5	Jehn Allen.....	8	12	13	15	..	..	..	10	10	9	..	..	9	9	10	12	10	..	15	15
58	Sullivau	1	Murray Briggs..	7	11	13	13	..	..	..	..	..	..	11	13	8	..	12	10	..	..	12	12
59	Hendricks...	11	Jacob Bader....	8	10	11	8	.	..	..	..	..	..	..	..	4	..	12	15	..	..	10	10
60	Marshall.....	1	Fred. Hoover...	12	13	15	12	..	..	..	..	..	..	..	..	10	8	10	8	..	..	12	100
61	Ripley	17	E. Saltmarsh....	8	11	12	10	..	..	..	10	..	..	10	10	8	7	10	12	..	..	10	4
62	Henry.......	1	P. P. Prifner....	5	11	13	15	..	..	..	10	11	5	..	..	8	3	10	10	10	..	15	15
63	Vermillion...	3	S. Grondyke....	5	12	15	15	..	..	..	3	5	9	12	20	6	5	12	20	..	..	15	15
64	Hendricks...	1	A. Furnas.......	5	10	11	15	..	..	..	10	..	..	..	..	8	5	10	9	8	9	10	6
65	Ripley	5	John Bennett...	10	12	13	11	..	..	..	..	..	..	..	..	8	9	13	10	10	..	15	15
66	Newton......	11	Elam G. Smith..	8	15	20	11	10	15	10	..	..	..	13	20	20	10	10	10	..	..	25	8
67	Grant	6	Wm. Thomas, jr	10	11	15	20	.	..	..	..	..	..	..	..	10	5	5	20	..	..	20	30
68	Switzerland..	3	W. H. Stow......	12	10	12	14	..	..	..	8	9	1	10	12	7	8	10	10	8	6	20	20
69	Green........	7	Wm. Hovis	9	10	12	11	..	..	..	..	..	..	13	10	9	8	12	10	..	..	11	9
	ILLINOIS																						
101	McDonough.	1	Nelson Abbott.	11	12	14	15	10	12	15	10	10	..	10	14	10	10	10	10	8	..	12	1
102	Coles.........	1	C. Boles.........	10	12	15	15	..	..	..	..	..	..	10	10	12	..	12	15	10	10	10	15
103	Saline	6	James M. Eaton	6	11	15	12	..	..	..	..	..	..	10	10	13	11	20	12	10	11	15	20
104	Jersey	3	J. M. Bacon.....	10	10	10	15	..	..	..	..	..	..	..	..	3	8	12	15	..	..	10	15
105	Jasper	1	Henry Griffing..	8	15	15	12	..	..	..	..	..	..	12	10	8	6	10	12	..	..	10	10
106	Pike..........	7	Thos. Odiorne..	6	12	10	8	5	8	..	9	9	..	..	..	..	..	10	10	10	10	14	14
107	Vermilion ...	1	H. C. Smith.....	8	12	10	13	7	7	6	..	..	8	..	..	8	7	10	12	..	..	12	12
108	Richland.....	1	H. A. Hunt......	8	13	35	12	..	..	..	..	..	..	..	..	5	..	20	12	..	..	8	10
109	St. Clair	1	Edw. Flauagan.	8	12	15	20	..	.	..	9	7	..	..	..	6	5	20	5	5	10	10	5
110	Marion.......	6	E. L. Merritt....	15	15	20	15	..	..	..	..	..	..	10	20	..	..	20	15	..	..	200	200
111	DeKalb... ..	1	C. W. Branch...	5	10	10	12	12	12	..	7	9	..	..	..	10	..	10	11	..	..	..	..
112	Macoupin ...	6	Harry Grundy..	10	13	12	20	5	20	8	..	..	..	..	..	3	10	14	10	..	..	12	40
113	Cumberland.	4	J. E. Mumford	15	20	20	15	20	10	10	..	..	..	20	15	..	..	20	50	..	..	15	15
114	Pntn'm& Mar	1	C. C. Hoagland..	6	8	..	10	10	10	8	..	..	..	5	10	15	10	10	15	..	..	10	..
115	Woodford...	1	James Freeman	5	10	9	7	8	9	9	..	..	..	..	..	9	9	15	10	10	..	15	..
	WIS.																						
151	Sauk.........	6	Abijah Sweet...	10	10	20	10	20	60	10	10	20	10	..	..	20	10	10	10	20	..	10	..
152	Dodge	1	D. L. Bancroft..	9	..	..	..	10	15	9	..	..	..	..	..	10	9	12	11	..	..	20	..
153	Fond du Lac	6	E. Reynolds	10	..	..	..	10	11	8	..	..	..	..	..	12	8	12	10	..	..	15	..
154	Walworth ...	1	Geo. Cross.. ...	8	..	..	..	10	..	10	11	9	..	..	..	10	10	10	8	10	..	..	..
155	Green Lake..	5	C. S. Whittler ..	8	..	..	..	11	11	9	..	..	..	..	..	10	9	12	10	10	9	13	..
156	Jackson	5	C. T. Gansel....	12	8	..	12	11	..	12	..	..	..	..	..	8	10	..	..	..	..	..	..
157	Dane	1	I. A. Kicrstead.	7	..	..	..	10	12	10	..	..	..	10	12	10	10	14	12	..	..	10	..
158	Trempleau ..	1	F. W. Newlaud.	10	20	15	12	13	15	9	..	..	..	..	..	..	..	12	10	..	..	10	..
159	Grant........	5	J. A. Curtis......	15	10	5	15	8	10	10	11	13	..	10	12	12	..	15	12	..	..	..	..
160	Adams.......	1	S. W. Pierce....	8	10	13	12	10	13	10	..	..	..	14	12	..	..	..	..	..	..	..	..
161	Badax........	1	J. A. Somerly...	5	11	15	15	12	15	10	..	..	..	11	10	5	10	15	10	10	10	11	10

Reg	County.	No	Chief Reporters.		Wint'r Wheat			Spring Wheat			Corn.			Rye.		Oat.		Hay		Potatos		Fruit. Ap	Ph.
				A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	R	S	T	U	V
	IOWA.																						
201	Jackson.....	9	H. Stephens....	7	..	..	..	12	9	8	..	..	..	..	..	10	9	20	10	10	..	..	..
202	Clinton	13	C. W. Hatch....	5	..	..	..	12	15	..	..	..	..	..	..	15	..	..	..	..	..	..	..
203	Cedar.......	28	J. A. Macy	10	10	3	15	10	23	8	.	..	..	..	..	..	..	..	..	..	..	10	..
204	Fayette	4	H. C. Wood....	12	..	..	..	11	..	12	..	..	..	..	..	..	..	..	..	..	..	..	..
205	Ringgold ...	1	I. S. Beall.......	8	10	15	10	10	15	8	10	15	8	15	10	15	8	..	10	20	10	12	12
206	Delaware....	30	J. L. McCreery.	8	..	..	..	14	17	9	11	13	..	..	..	8	8	8	7	10	9	13	..
207	Powshiek....	13	Erastus Snow..	8	..	..	..	9	..	10	..	..	..	..	..	..	..	..	..	..	..	..	..
208	Marion......	5	B. C. Bellamy..	4	..	..	12	..	..	10	..	..	..	15	12	..	10	30	15	..	..	10	..
209	Cedar.......	6	J. C. Alexander	5	..	..	..	11	13	5	..	..	..	..	..	10	5	12	12	..	..	15	..
210	Madison	1	J. Carman	9	10	10	15	8	10	8	..	..	..	5	15	..	..	..	..	..	..	..	..
211	Scott........	1	T. F. C. Schmidt	8	..	..	..	11	15	10	..	..	..	..	..	10	..	11	..	..	..	..	..
212	Buchanau ...	m	H. C. Heminway	8	..	..	..	11	13	10	10	12	10	9	13	11	10	12	12	12	10	15	..
213	Howard......	5	C. Marshall....	15	..	..	..	14	40	13	18	25	..	..	..	30	13	..	..	12	..	..	..
214	Lucas........	1	M. Moorhead..	10	..	..	..	7	12	8	..	..	..	..	..	7	8	..	..	..	..	..	..
215	Page.........	51	SH Kridelbaugh	8	11	20	10	11	99	10	10	70	..	..	..	40	10	..	10	50	..	10	4
	MINN.																						
251	Hennepin.. ...	11	Jonas H. Howe.	12	..	..	..	11	18	10	..	..	..	3	10	15	..	..	..	12	..	..	..
252	Fillmore	1	A. Gould.......	11	10	..	15	12	20	15	13	15	9	11	..	12	..	10	10	10	..	..	..
253	Dodge..	2	T. G. Patch.....	10	..	..	..	15	40	10	..	..	..	..	..	20	10	..	..	..	..	..	..
254	Olmstead....	2	R. H. Talbot....	11	..	..	..	13	25	10	13	29	..	10	10	20	..	..	..	20	..	..	..
255	Winona... ..	10	S. R. Crittenden	13	13	20	25	11	15	14	12	9	..	6	10	15	10	12	..	11	..	10	..
256	Sibley........	9	J. U. Green.....	12	..	..	..	15	35	9	18	30	..	8	10	20	10	..	..	25	..	..	..
	MO.																						
300	Maries.......	7	W. J. Meeder...	8	9	10	10	11	15	10	10	12	8	10	10	9	8	10	10	10	8	10	10
301	Mississippi .	1	Geo. Whitcomb.	11	10	12	10	..	..	..	5	..	10	..	..	10	10	10	10	10	10	10	..
	KY.																						
326	Spencer	10	Milton McGrew.	7	10	11	9	..	..	..	8	10	7	6	5	9	6	12	8	11	8	5	6
	MICH.																						
351	St. Joseph....	15	O. W. Beall....	5	10	10	10	..	..	..	0	10	..	..	..	10	..	11	10	11	..	20	20
352	Berrien.......	1	A. Bennett.....	6	10	12	15	..	..	..	..	..	..	..	..	8	..	10	10	..	..	15	20
353	Clinton	m	H. C. Hodge	12	12	20	12	10	15	10	12	15	10	..	..	15	10	15	10	15	10	15	15
354	Jackson	21	L. D. Watkins ..	12	10	14	15	..	..	..	8	10	..	..	..	5	..	10	5	10	..	20	15
355	Sanilac.......	13	C. Waterbury..	7	20	30	15	5	8	10	..	..	..	10	10	15	10	15	12	..	..	10	10
356	Calhoun	1	C. M. Keep......	5	10	12	9	..	..	..	..	..	..	..	..	10	..	12	8	..	..	10	20
357	Clinton	6	John Watling.	6	16	40	18	15	35	..	..	..	..	10	12	10	..	45	10	..	..	15	..
358	Lenawee	7	Rufus Baker....	12	11	11	13	..	..	..	10	10	..	..	..	10	..	10	..	9	..	8	30
	N. Y.																						
401	Chautauqua..	1	John J. Phelps..	12	10	12	10	10	10	10	..	..	..	..	..	11	10	10	8	10	..	15	20
402	Orleans......	1	Peter Ferris....	7	12	20	11	10	15	..	..	..	..	..	..	5	..	10	12	..	..	..	..
403	Lewis........	1	John F. Bates .	8	..	..	..	..	..	..	..	..	..	..	..	..	..	15	4	..	..	..	..
404	Wyoming.....	6	Linns De Wolfe	4	15	8	15	12	15	..	..	..	..	..	..	..	..	10	13	..	..	20	20
405	St. Lawrence	1	J. S. Wallace...	6	..	..	..	..	..	..	..	..	..	8	10	..	..	10	8	..	..	11	..
406	Delaware....	4	Levi Miles	10	7	10	15	8	10	..	..	..	..	13	15	9	..	13	10	12	..	10	..
407	Niagara .. ,.	4	J. Q. Adams....	15	10	10	12	13	12	..	..	..	..	..	..	..	..	10	15	..	..	15	20
408	Suffolk....	1	G. E. Woodruff	10	12	10	15	5	8	10	12	10	..	11	15	13	10	12	9	15	..	..	..
409	Fulton......	1	Geo. W. Heaton	6	10	14	9	..	14	9	..	..	..	10	..	..	..	11	10	..	..	9	9
410	Niagara......	1	A. E. Raymond.	8	15	40	20	7	15	10	..	..	..	.	..	10	..	8	20	15	..	8	50
411	Oswego......	1	D. Farling......	5	8	8	8	5	8	10	..	..	..	..	..	..	..	12	15	8	8	20	20
412	Chenango....	3	H. T. Richmond	8	12	20	8	8	5	..	..	..	..	10	10	10	..	12	8	..	..	..	..
413	Otsego.......	2	H. T. Richmond	8	12	20	8	8	8	..	..	..	..	10	10	10	..	12	8	..	..	..	..
414	Wayne	1	A.M.Richardson	10	10	13	9	15	20	..	..	..	..	1	10	10	..	..	..	..	..	..	..
415	Cayuga	1	B. W.Thompson	10	12	14	12	10	10	8	10	10	..	6	11	8	8	10	10	..	..	15	15
416	Chautauqua .	1	H.A.Whittem're	12	10	10	15	13	15	10	15	10	..	..	..	20	10	10	..	12	..	20	40
417	Ontario......	6	E. A. McKay....	12	13	20	13	8	5	10	10	10	..	7	10	10	..	12	13	..	..	13	20
418	Saratoga	1	J. C. Rouse......	..	11	..	10	12	..	..	..	..	..	10	10	12	..	10	11	12	..	..	10
419	Onondaga....	3	D. G. Newell ...	13	12	..	10	..	..	..	..	..	..	7	11	..	..	..	..	..	..	15	..
420	Queens.......	m	Farmer's Club..	10	10	11	12	..	..	..	10	10	..	13	12	10	10	12	10	9	..	15	..
421	Essex........	1	Jos. E. Smith,..	10	10	10	20	8	10	..	..	..	..	10	15	8	10	15	20	10	..	15	..
422	Suffolk	5	Watson Wilson.	10	15	30	10	10	35	10	20	30	..	30	7	20	10	15	10	20	10	20	..
423	Wyoming....	4	D. T. Griffin	8	7	13	8	10	..	..	..	..	..	..	..	10	..	11	12	9	..	..	..
	PENN.																						
451	Franklin.....	17	John F. Clayton	10	11	10	11	..	..	..	..	..	..	9	9	8	10	10	9	..	..	6	8
452	Franklin.....	17	Jas. F. Clayton	7	12	11	15	..	..	..	..	..	..	6	8	5	10	10	11	..	..	14	12
453	Bradford	1	E. B. Barns.....	11	13	12	14	8	9	..	..	..	..	..	13	..	..	..	9	..	..	15	50
454	Snyder.......	1	F. Weirick......	7	..	..	12	..	..	..	..	..	..	..	..	..	..	..	12	..	..	10	15
455	Franklin.....	1	O. S. Brown.....	5	10	15	20	..	..	..	..	..	..	5	20	10	5	10	10	..	..	20	20
456	Fayette......	9	F. Oglevee......	10	10	10	20	15	25	10	10	10	..	8	8	5	..	10	10	10	..	20	20
457	Dauphin.....	2	D. Brightbill....	9	11	15	15	..	..	..	10	15	..	10	15	12	10	10	10	10	10	15	10
458	Franklin	26	J. Sharpe Nixon	5	11	12	13	..	..	..	9	10	..	10	15	7	..	10	15	..	..	20	20
459	Perry	6	Alex. Kauffman	7	13	20	15	..	..	..	10	11	..	5	10	12	15	10	15	12	..	15	5
460	Montgomery	6	J. C. Boorse....	5	10	12	15	..	..	..	..	..	..	14	15	..	..	10	20	..	..	..	15
461	Lancaster ...	1	Cyrns Brinton..	10	10	12	9	..	..	..	10	11	..	..	..	8	..	9	10	12	..	20	20
462	Lancaster....	1	Jacob M. Seitz..	8	10	..	12	..	..	..	..	..	..	10	10	8	10	12	14	15	..	30	100
463	Cambria... ..	1	John Lloyd....	7	10	12	12	10	10	..	..	..	..	10	10	10	..	10	..	10	..	300	300
464	Fulton......	21	John Hoke......	..	13	15	15	..	..	..	..	..	..	10	15	..	..	10	15	..	..	15	15
465	Delaware....	4	Chas. G. Ogden.	..	12	12	12	..	..	..	8	10	..	.	..	10	..	10	12	8	..	100	20
466	Franklin	5	O. H. Anderson.	8	10	10	15	..	..	..	10	10	..	4	7	10	7	10	10	..	..	20	20
467	Blair.........	5	S. B. Replogle..	6	11	12	15	..	..	..	..	..	..	10	..	7	8	..	..	..	..	..	..
468	Centre	1	D. G. Klein......	10	10	10	12	..	..	..	10	..	..	10	10	..	..	10	10	..	..	10	10
469	Butler.......	1	Finley Balph...	7	12	15	12	20	50	..	..	..	..	6	10	10	..	10	8	..	..	15	20
470	Montgomery	7	A. Zimmerman.	7	10	10	15	..	..	..	..	..	..	10	12	9	..	10	15	..	..	12	..
471	Susquehanna	10	G. B. Slack	12	30	20	9	10	40	..	..	..	..	..	8	10	..	..	..	..	..	..	..
472	Fayette.....	7	Jas. Robinson..	8	15	10	20	8	15	5	10	10	..	6	8	10	5	10	6	10	..	50	..
473	Washington..	1	John Post......	12	10	10	20	..	..	..	12	10	..	2	[illegible]	15	8	10	15	15	..	20	20
474	Lancaster....	6	H. Musselman..	10	11	12	11	..	..	..	10	10	..	12	10	11	..	9	9	..	..	15	10
475	Columbia....	12	A. P. Young...	8	11	13	12	..	..	..	..	..	..	8	12	10	..	10	9	..	..	10	20
476	York.......	5	L. P. Harman..	8	10	13	20	..	..	..	11	13	..	5	15	13	5	7	11	13	..	30	15
477	Washington..	1	Jos. M. Cleery.	10	10	10	14	20	40	..	10	10	..	10	6	9	5	10	8	..	..	40	40
478	Chester	1	A. V. Trimble..	12	10	10	13	..	..	..	10	10	..	8	..	10	8	10	9	9	..	20	40
	N. J.																						
501	Cape May....	1	J. G. Leach.....	..	14	20	15	12	20	15	15	25	..	11	15	20	20	14	10	20	10	..	..
502	Mercer.... .	2	S. P. Nicholson..	..	10	14	15	..	..	..	..	..	..	7	9	9	11	10	10	12	..	15	30
503	Somerset	7	A. Fleming......	5	10	10	13	..	..	..	..	..	..	10	10	7	..	10	12	..	..	15	20
504	Hunterdon ..	2	D. J. Blackwell.	8	10	10	15	..	..	..	..	..	..	10	15	9	9	10	10	8	..	12	50
505	Mercer	1	Ira J. Blackwell	9	10	10	12	..	..	..	10	10	9	9	10	10	10	10	13	11	10	15	300
506	Middlesex....	5	J. G. Shultz.....	..	10	15	13	..	..	..	10	13	..	8	13	10	..	10	10	8	..	20	50
507	Mercer	5	C. M. Norton....	8	10	12	14	..	..	..	..	..	..	6	14	8	10	12	12	15	..	20	30
508	Warren......	10	C. O. Harris	10	13	11	12	30	20	10	..	..	..	10	12	10	10	12	10	..	..	..	..
	MD.																						
526	Cecil	2	R. F. Rowland..	6	12	10	12	..	..	..	10	..	..	6	10	13	8	10	8	11	..	..	10
527	Cecil.........	2	R. F. Rowland..	11	9	11	10	..	..	..	9	..	..	5	10	12	7	10	6	9	..	..	10
528	Dorchester ..	1	Jonas Parker...	5	9	11	12	..	..	..	..	..	..	5	10	12	10	..	..	8	..	15	15
529	Allegany.....	12	T. E. Ogden	9	10	12	15	..	..	..	9	..	..	12	15	8	..	12	12	10	..	30	30
530	Worcester...	8	B. E. Smith......	5	10	10	7	..	..	..	10	10	..	10	7	10	7	..	..	11	7	15	15
	DEL.																						
551	Kent.........	11	T. B. Courscy...	8	10	10	14	..	..	..	10	12	..	..	..	8	8	20	15	10	..	20	20
	VA.																						
576	Wood........	1	E. Meldahl......	5	12	12	15	..	..	..	8	10	..	..	..	13	15	10	13	15	..	50	100
577	Wood........	1	J. E. Wharton..	5	11	12	14	..	..	..	11	14	10	..	..	13	15	10	15	..	..	18	18
	MAINE.																						
601	Waldo	1	Geo.E.Brackett	9	..	..	..	..	..	..	..	..	..	..	..	..	..	10	12	..	..	15	..
602	Kennebec....	1	R. M. Manson...	6	..	..	..	..	..	..	..	..	..	..	..	..	..	10	..	10	..	12	..
	N. H.																						
626	Cheshire.....	1	Geo. H. Gilbert.	5	10	10	..	5	6	9	..	..	..	..	..	5	8	10	11	..	..	11	..
627	Merrimac ..	11	J. W. Simonds..	7	10	12	..	15	12	..	..	..	..	7	..	10	..	..	..	..	..	..	..
	VT.																						
651	Bennington..	1	Allen Benson...	7	..	..	..	10	10	..	..	..	..	10	..	10	..	10	10	10	..	10	..
652	Orange.	1	J. R. Cleaveland	7	..	..	..	..	..	..	..	..	..	..	..	..	..	10	10	..	..	10	..
653	Orange......	1	Rufus Brown....	..	..	..	..	11	10	..	..	..	..	10	..	10	..	10	10	11	..	..	..
654	Caledonia	1	J. Lawrence....	5	..	..	..	10	15	..	..	..	..	12	..	11	10	..	..	..	..	20	..
655	Chittenden ..	1	W.H. Kingsbury	..	6	..	10	9	..	..	10	..	..	12	..	11	..	..	10	12	..	15	..
	MASS.																						
676	Berkshire....	14	S. S. Jenue......	12	..	..	..	10	12	..	..	..	..	10	15	9	..	12	15	..	..	10	..
	CONN.																						
701	New London	1	W. H. Starr	8	..	..	..	..	..	..	10	12	..	3	10	12	..	12	10	15	..	10	15
702	New-Haven..	6	E. Phelps.......	5	..	..	..	..	..	..	..	..	..	10	7	10	10	10	7	..	..	15	15
703	Litchfield....	19	G. R. Reynolds	15	..	..	..	..	..	..	..	..	10	15	12	18	10	10	5	7	11	11	..
700	Litchfield.....	1	G. R. Reynolds.	13	..	..	..	..	..	..	..	..	7	10	9	10	15	10	9	8	15	10	..
705	Litchfield.....	5	Wm. Wauzee..	9	10	11	9	6	6	..	10	10	..	10	10	10	..	11	10	11	..	10	10
	R. I.																						
726	Newport.....	9	J. E. Macomber	15	..	..	..	..	..	..	12	13	..	10	10	12	12	10	11	12	10	15	..
	Number of Persons....	**973**	*Average for the whole Country..*	A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	R	S	T	U	V
				9	11	14	13	11	18	10	10	13	9	10	11	10	9	12	11	12	10	20	30

Reports on Sorghum—Maple Sugar—Barley—Flax, etc.

With the preceding general reports, came estimates of several other crops, of which the following is a summary:

Sorghum.—We have compiled the reports from *Thirty* counties in the Western or Northwestern States, including three counties in Pennsylvania, from which the estimates indicate that the surface planted this year will be **2 3-4** times greater than for any previous year.

Maple Sugar.—The reports from Vermont, New-York, and Ohio, range from less than half, to four times the usual amount of maple sugar made this year. The *average* of all the reports indicate that the product has been one-fourth greater than usual, but there are too few figures to give an estimate for the whole country.

Barley.—Reports received from only 25 counties, in New-York and at the West. These indicate that an average of *one-fourth above* the usual crop, is being sown this year. A larger number of reports are needed, however, to make out a ratio for the whole country. We shall doubtless have this before the harvest season.

Flax.—A few reports from Flax-growing regions indicate a large sowing of this crop. In Cedar County, Iowa, Mr. May, reports a double surface. In Newton County, Ind., Mr. E. G. Smith, reports four times the usual surface. In Benton County, Ind., Mr. D. Campbell, reports five times the usual surface. In other localities the estimates range from one-fifth less to a double surface.

Other Crops.—We have other scattering reports on Peas, Beans, Hops, Onions, Sweet Potatoes, Tobacco, Grapes, etc., etc., but not enough to form any estimate for the country at large.

Average Price of Potatoes, Carrots and Rutabagas for Every Month in the Year Past.

A year ago, (p. 204,) Mr. Geo. W. Walker, Pier 30, East River, furnished an interesting table, showing the average price of potatoes for seven years past. We are now enabled to compile from his figures the following table, which has a still more practical value:

	POTATOES PER BARREL.				
	Mercers.	*Peach-blows.*	*Common kinds.*	*Carrots, pr. bbl.*	*Rutabaga turnips pr. bbl.*
April	$2 18¾	$1 81¼	$1 43¾	$......	$......
May	2 37½	2 18¾	1 81¼	1 37½	50
June	1 56¼	1 56¼	1 25	1 50	62
July	1 25 1 56¼*	1 12½	81¼ 1 81¼*	none.	1 04*
August	1 62½	none.	1 43¾	1 87½*	68
Septem'r.	1 62½	1 50*	1 12½	1 50	75
October	1 43¾	1 25	1 06¼	1 00	88
Novem'r.	1 93¾	1 53	1 31¼	90	68
Decem'r.	2 18¾	1 87½	1 50	82	82
January	2 37½	1 93¾	1 56¼	90	90
February	2 34	1 93¾	1 68¾	82	1 00
March	2 62	2 12	1 81¼	82	94
April				1 00	1 00

(*) Indicates appearance of new crop in market.

Owing to the stoppage of shipments of merchandise to ports south of the Delaware, and down the Mississippi River, large quantities of produce came from the West and some potatoes were sold as low as 50c. a bbl. in July.

Carrots and Turnips have been in good demand this year, the desiccating companies using large quantities to supply the army. They use about 500 bbls. a week, and have kept the market unusually steady for soup vegetables.

Market Review, Prices, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Monday Morning, May 19, 1862.

The condensed but very comprehensive tables, below, show at a glance the amount of the transactions in the flour and grain markets. It will be noted that there has been a large increase in the amount of receipts, as compared with the previous month, in every thing but Barley. The increased receipts of the principal articles, Flour, Wheat, and Corn, are very marked, particularly in Wheat, the receipts of which have reached 518,000 bushels during 25 business days, against only 107,370 for 26 days last month. The sales of Wheat, Flour, and Barley, have also been much larger. As compared with the same period last year, however, the transactions have been less this year, especially as regards wheat. This is mainly due to the later opening of the Canals, than usual. Tables 4 to 8, give interesting statistics of the condition of the grain trade at the principal Western inland ports. At Chicago, the receipts of Wheat and Corn have been smaller this year, while the stocks on hand, on the 12th of May, the date of our latest reports, are in marked excess. .... When our previous report closed, there was a sharp upward turn in prices, which promised to continue, and the advance went on for a few days, until nearly the highest figures of the year were reached, but another downward turn again occurred, which has continued until now, and holders of large stocks of breadstuffs are apparently almost panic stricken. The causes of this decline have been mainly the same as referred to last month, added to which has been the material advance in ocean freights. So high is the charge for ship room now, that there is little encouragement to exporters to purchase for foreign markets in their present depressed condition, except at very low rates. Perhaps as a just retribution for their course at the beginning of our war, and their manifest desire to see our country crippled and divided, England and France are now suffering financially even more than ourselves, from the effects of the war. Millions of their inhabitants who have hitherto lived by manufacturing American Cotton, are now out of employment, and unable to purchase the better class of breadstuffs, while the economy practised in this country very greatly depresses their sales of manufactured articles. Recently we have many rumors that England and France will attempt to interfere with the war here in order to obtain a supply of cotton. The foolishness of such a course would seem to be evident. Cotton will do them no good, if they can not sell their manufactures, which they will be unable to do if by "intervention" here they break up their trade with us. America is the largest, the principal market for English and French manufactures, but the least attempt to interfere with our domestic affairs would close our ports against them.—Now we send abroad, from the West, corn worth 10 to 15 cents a bushel there, for which the foreign consumer pays 80c. to 90c., owing to the cost of transportation. It will not require much foreign jealousy and interference to lead the people of this country to inquire whether it may not be quite as well to shut out imports by a prohibitory tariff, and do our own manufacturing at the west where food is plenty and cheap, and where coal and the raw materials—iron, cotton and wool—are at hand. We have, from principle, always been opposed to "protective" tariffs, but the present course of events strongly indicates the *practical* utility of consuming our agricultural products in manufactures at home, and thus save the great cost of transportation. But, except as the subject directly affects the agricultural interest of our country, we shall not open our columns to the discussion of tariffs......So far as *present* rates are concerned, the immediate prospects of our farmers for high prices are not so favorable as we had hoped for, and as we fully expected to report at this date. The extremely favorable weather abroad, and the distress in the manufacturing districts, continue to depress the foreign breadstuff markets. The crop prospects in this country are on the whole very favorable. (See the extended reports given elsewhere in this paper.) The late opening of the Spring, has retarded Spring sowing and planting, but the effect of the weather upon Winter grain crops, and upon fruit, has been of the most satisfactory character. The very unusual absence of frost after warm weather finally set in, has been in the highest degree advantageous to crops. With no untoward weather hereafter, our next harvest will be one of the largest yet known, that is for Winter and Spring wheat, for grass, and for fruit.....COTTON advanced considerably, subsequent to our last report, but closes with a downward tendency....Provisions have been quoted active, but at unsettled rates....Hog products (pork, hams, bacon, and lard,) close at declining rates....Beef, Butter, and Cheese, are firmly held; old Butter is scarce, among wholesale dealers....Tobacco has recently been in good request at very full prices....Wool has been more sought after, and holders have exhibited increased firmness.... Hay and Hops have been in fair demand at steady rates.. The transactions in other agricultural products have been on a moderate scale. The table of prices show the changes and the present rates.

CURRENT WHOLESALE PRICES.

	April 21.	May 19.
FLOUR—Super to Extra State	$4 55 @ 5 10	$4 35 @ 4 85
Superfine Western	4 50 @ 4 70	4 35 @ 4 45
Extra Western	4 80 @ 6 40	4 50 @ 6 75
Fancy to Extra Genesee	5 15 @ 6 40	4 90 @ 6 75
Super. to Extra Southern	4 80 @ 7 00	4 85 @ 6 75
RYE FLOUR—Fine and Super.	3 10 @ 4 25	3 10 @ 4 25
CORN MEAL	2 80 @ 3 15	2 80 @ 3 20
WHEAT—Canada White	1 35 @ 1 40	1 23 @ 1 33
Western White	1 35 @ 1 45	1 22 @ 1 37
All kinds of Red	1 10 @ 1 35	90 @ 1 15
CORN—Yellow	57 @ 58	54 @ 56
White	60 @ 70	Nominal.
Mixed	58 @ 59½	49 @ 51½
OATS—Western	38 @ 39	39 @ 41
State	39 @ 40	41 @ 42
RYE	79 @ 82	75 @ 76
BARLEY	70 @ 1 00	68 @ 85
HAY, in bales, per 100 lbs	55 @ 70	65 @ 80
COTTON—Middlings, per lb	29½ @ 30	27 @ 27½
RICE, per 100 lbs	6 00 @ 7 25	6 50 @ 7 50
HOPS, crop of 1861, per lb	12 @ 18	12 @ 18
FEATHERS, Live Geese, p. lb.	34 @ 38	34 @ 38
SEED—Clover, per lb	7¾ @ 8½	Nominal.
Timothy, per bushel	1 75 @ 2 00	1 50 @ 1 75
SUGAR—Brown, per lb	6 @ 8½	6¼ @ 8¾
MOLASSES, New-Orleans, p. gl.	40 @ 45	40 @ 45
COFFEE, Rio, per lb	18 @ 21½	19 @ 22
TOBACCO—Kentucky, &c, p. lb.	7½ @ 18	7 @ 18
Seed Leaf, per lb	7 @ 25	7 @ 25
WOOL—Domestic fleece, p. lb.	38 @ 53	38 @ 52
Domestic, pulled, per lb	32 @ 45	34 @ 46
TALLOW, per lb	8⅝ @ 8⅞	8⅛ @ 9
OIL CAKE, per tun	34 00 @ 37 50	33 00 @ 37 50
PORK—Mess, per bbl	12 25 @ 12 50	12 37 @ 12 50
Prime, per bbl	10 00 @ 10 25	9 75 @ 10 00
BEEF—Plain mess	12 00 @ 12 37½	12 50 @ 13 50
LARD, in bbls., per lb	7½ @ 8¼	7¾ @ 8½
BUTTER—Western, per lb	9 @ 14	11 @ 17
State, per lb	16 @ 20	10 @ 17
CHEESE	6½ @ 9	6 @ 8½
Broom Corn—per lb	4 @ 6	5 @ 7
EGGS—Fresh, per dozen	12 @ 13	8 @ 10
POULTRY—Fowls, per lb	12 @ 14	9 @ 10
Ducks, per pair		50 @ 75
Geese, per pair		1 25 @ 1 50
Turkeys, per lb	10 @ 15	10 @ 12
Dried Apples, per lb	6 @ 6½	5 @ 6
Dried Peaches, per lb., peeled	18 @ 20	20 @ 25
Dried Raspberries, per lb	13 @ 14	16 @ 17
POTATOES—Mercers, p. bbl.	2 50 @ 2 62	1 75 @ 2 50
Peachblows, per bbl	2 00 @ 2 12	1 88 @ 2 13
Nova Scotias—per bush	55 @ 60	55 @ 60
Bermuda—New, per bbl		5 25 @
Sweet Delaware, per bbl	3 00 @ 3 50	3 50 @ 4 00
ONIONS—Red, per bbl	1 62 @ 1 75	1 87 @ 2 00
Bermuda Onions, per lb		4½ @ 5
TURNIPS—Rutabaga, per bbl.	1 00 @	1 25 @
APPLES—Russet, per bbl		3 00 @ 3 50
RHUBARB, per 100 bunches		2 00 @ 4 00
ASPARAGUS, per doz. bunch.		1 00 @ 2 00
LETTUCE, per dozen		25 @ 37
RADISHES, per 100 bunches		50 @ 1 00

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 days *this* m'th	371,000	518,000	390,000	53,000	101,000	176,000
26 days *last* m'th	248,650	107,370	263,000	49,650	116,000	143,000

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
25 days *this* month,	411,000	698,000	1,306,000	154,000	98,000
26 days *last* month	305,800	389,000	1,367,000	138,000	235,000

2. *Comparison with same date last year.*

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 days 1862	371,000	518,000	390,000	53,000	101,000	176,000
25 days 1861	334,000	1,122,000	755,000	19,850	93,000	317,000

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
25 days 1862	411,000	698,000	1,306,000	154,000	98,000
25 days 1861	424,000	2,399,000	1,555,000	73,450	84,750

3. *Exports from New-York, from Jan. 1 to May 15.*

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862	941,002	2,627,204	4,789,770	643,862	70	17,978
1861	843,585	4,415,825	3,651,053	46,081	1,000	43,024
1860	281,511	424,100	299,701	100	200	765

4. RECEIPTS AT CHICAGO, JAN. 1, TO MAY 12.

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862	403,561	2,016,701	2,728,778	278,661	377,389	305,438
1861	419,223	2,434,321	4,209,631	109,930	282,178	217,657
1860	160,756	1,189,504	4,414,195	53,427	172,118	427,072

5. *Stock in store at Chicago, May 12.*

	Flour.	*Wheat.*	*Corn.*	*Oats.*
1862	66,000	1,094,356	2,099,047	——
1861	44,056	504,139	1,155,620	566,229

6. RECEIPTS AT MILWAUKEE, JAN. 1, TO MAY 12.

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862	144,318	2,308,888	83,763	29,370	46,917	69,703
1861	119,647	1,791,485	45,561	11,830	33,616	14,908

7. RECEIPTS AT DETROIT, JAN. 1, TO MAY 12.

	Flour.	*Wheat.*	*Corn.*
1862	140,435	343,119	186,378

8. RECEIPTS AT TOLEDO, JAN. 1. TO MAY 12.

	Flour.	*Wheat.*	*Corn.*
1862	293,852	651,137	868,304

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been over-supplied, the past month, the average receipts being 4,469 per week, or a total of 3,600 head more than for the previous month. Graziers have been buying for Spring and Summer feeding, and Government agents have taken a few hundred each week for the Navy, and for shipping to southern ports. But with these aids it has been difficult to sell all the cattle, during this season of cheap shad and eggs, with a full supply of early fresh vegetables. At the last general market, May 13th, with 4,800 cattle on sale, prices ruled low. The best bullocks sold at 8c.@8½c. ₰ lb. estimated dressed weight; fair steers 7½c.; poor 6c.@7c.; with an average of 7¾c. for all sold, most of which were of good quality. Market dragging. The indications to-day are for a smaller supply and higher prices this week.

Veal Calves.—Receipts for the past month, number 9,300 per week, not including large numbers which are sold direct from the river barges. The market has been over-stocked each week and prices have ruled low at the pretty uniform rates of 5c. per lb. live weight for the best; 4c.@4½c. for good, and 2½c.@3½c. for poor; many young calves are sold by the head at $1 and less.

Sheep and Lambs.—Now that the fleeces are all taken off, receipts are on the increase, though still moderate. The average for a month past has been 5,817 per week. Sheep bring $3 to $5 per head, equivalent to 4c.@4¾c. ₰ lb. live weight, while Spring lambs of 55 to 65 lbs. live weight, sell at 7½c.@8c. ₰ lb., or $4@$5½ each.

Live Hogs.—Receipts about the same as last month, or 11,997 per week, and prices ½c. lower than 4 weeks ago, with a slow over-stocked market. Prime heavy corn-fed hogs are the only ones which sell readily. They are worth 3½c.@4¾c. ₰ lb. live weight, and still-fed hogs, 3¼c.@3½c. Light and poor hogs, whether corn-fed or otherwise, can scarcely be sold at 2¾c.@3¼c. ₰ lb.

The Weather, for most of the month past, has been favorable for farm operations, and the present prospects indicate a fruitful season, especially so for the tree fruits, which have thus far been less affected by frosts than during any previous Spring for several years past. The season is now about one week later than last year, but probably none the less favorable on that account, except so far as the late opening of the ground hindered getting in the earlier crops. The ground is rather dry under two weeks of warm sunshine, with scarcely rain enough to lay the dust, and at this date some are fearing an early drouth. OUR DAILY NOTES, condensed, read: *April* 19 to 22, rain storm, soaking the ground thoroughly (2½ inches,)—23 to 27, clear, warm days; peach trees blooming in city yards—28, 29, cloudy, with light rain—30, clear, warm.——*May* 1, 2, heavy N. E. rain storm, flooding streams—3, 4, clear, warm—5, thunder shower P. M.—6, wind and showers, (Stuyvesant pear tree in bloom, 12 days later than last season)—7, wind and clouds—8 to 13, clear, fine growing weather; slight shower night of 13th. ground dry—14 to 18, mostly warm, clear weather; ground getting quite dry—19, cloudy, with light showers—20, cloudy—21, fine rain.

Rain Fall.—From the 15th of April, to the 15th of May, there were **3.95** inches of rain, the most of which fell on the 1st and 2d of May.

Advertisements.

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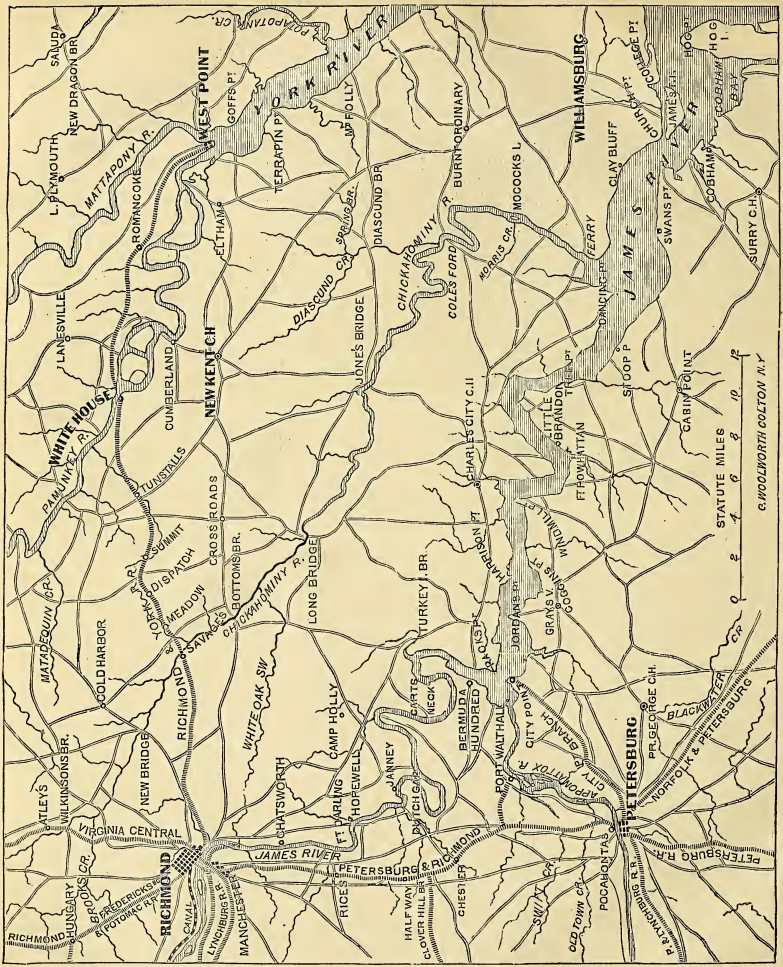

RICHMOND, Va., AND VICINITY.—The above accurate map, shows a section of great interest just now. It is on a scale of *five miles to the inch*. The Union forces, under General McClellan, are reported to-day (May 21,) to have advanced towards Richmond, as far as the Chickahominy River, at Bottom's Bridge, New Bridge, etc. Fort Darling, on James River, 8 miles below Richmond, was reached by the Monitor and other gun-boats last week. Our map last month, showed the whole country from Richmond to Yorktown, Fortress Monroe, etc.

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American Farmer's Encyclopedia	1 00
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Allen's (A. J.) Fruit Architecture	1 25
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Bementis Poulterer's Companion *	1 25
Bonsingnault's (J. B.) Rural Economy	1 25
Bridgeman's Young Gardener's Assistant*	1 50
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Bridgeman's Fruit Cultivator's Manual	60
Beauty's Age of Horses*	1 00
Buist's American Flower Garden Directory	1 75
Buist's Family Kitchen Gardener*	75
Central Park Guide*	1 25
Chorlton's Grape-Grower's Guide*	60
Cole's (S. W.) American Fruit Book	50
Dadd's (Geo. H.) Modern Horse Doctor*	1 00
Dadd's (Geo. H.) American Cattle Doctor	1 00
Dana's Muck Manual for Farmers	1 00
Downing's Cottage Residences*	2 00
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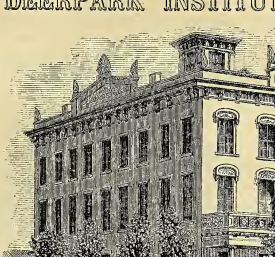

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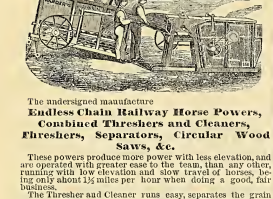

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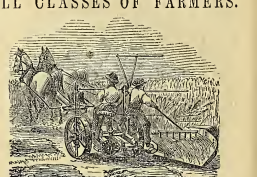

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For the best quart Hovey's Seedling.....	1
For the best quart Hovey's Seedling.....	1
For the best quart Victoria.....	1
For the best quart Jenny Lind.....	1
For the best quart Vicomtesse Hericart de Thury...	1

The berries to come in competition for the premiums must be upon the tables as early as 10 A. M.* on Friday, June 20th, and each specimen must be correctly labeled. The Awarding Committee will attend to their duties at 11 A. M.—at which hour the exhibition will open. When the premiums are awarded, the *names, places of residence* and of *business* of the exhibitors will be placed upon the specimens, and the prize samples properly designated.

It is particularly requested that persons intending to exhibit fruit announce, *if possible*, about the number of samples they intend to show, some days before hand, in order that we may provide suitable space for them.

The fruit will be subject to the order of the exhibitors at 1 P. M., except the best, if they choose to retain it.

* Exhibitors living at a distance, whose fruit previously announced, can not arrive so as to be on the tables punctually at 10 o'clock, will be allowed a reasonable margin in the judgment of the committee.

An American Exhibition

OF

Pumpkins, Squashes, and Ornamental Gourds.

There will be a Public Exhibition of **Pumpkins, Squashes, and Ornamental Gourds,** at the office of the *American Agriculturist*, 41 Park Row, New York City, opening on Wednesday, Nov. 5th, 1862, at which the following prizes will be paid by the Publisher, upon the official award of competent Committees.

CASH PREMIUMS.

I.	For the *Heaviest* Pumpkin or Squash...	$20.00
II.	For the 2d do. do.	10.00
III.	For the 3d do. do.	5.00
IV.	For the Best do. do. for cooking..	10.00
V.	For the 2nd Best do. do.	5.00
VI.	For the largest yield on a single Vine*....	10.00
VII.	For the 2nd do. do. *....	5.00
VIII.	For the largest and finest collection of Fancy or Ornamental Gourds*.....	10.00
IX.	For the 2nd do. do. *....	5.00

* All to be grown by one person and to be accompanied by an affirmed statement from the grower, and two disinterested persons who assist in gathering the specimens.

Note 1.—The specimens receiving the Prizes will remain on Public Exhibition at the pleasure of the Publisher who offers the prizes. The other specimens will be subject to the order of the exhibitors, or they will be sold at Auction or otherwise disposed of, for their benefit.

Note 2.—All Exhibitors must notify us of their intentions by Oct. 10th, and deliver specimens for competition on or before Nov. 3d. Specimens to be delivered free of charge.

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For June and July, 1862.

STRAWBERRY PLANTS

Sent Free by Mail.

The Strawberry premiums offered previous to May 10th seemed to give general satisfaction. We sent out many thousands of plants to almost every part of the country, all of which, we trust, are growing finely. (The plants were growing too rapidly to be forwarded by mail *after* the advertised time, May 10, and a few sent after that date, to late applicants, perhaps did not reach them in so good order as if sent earlier.) In response to many requests, we continue the Strawberry Premiums, the plants to be sent out the latter part of August or the first of September, according to the season, and the locality for which they are designed. We are propagating plants in our grounds, and have engaged a supply from elsewhere. At present, we will only propose the **Triomphe de Gand,** and **Bartlett,** as hitherto offered; but should the present season develop superior qualities in other new varieties, an equivalent of the new selections will be given. A list of such sorts (perhaps several) as we can furnish will be published in the *August Agriculturist*. Plants to set out, in quantity, early in September, will multiply somewhat this year, and bear next Spring.

CONDITIONS:

PREMIUM I. To any person forwarding, (*now* or before August 1st), ONE subscriber to the *American Agriculturist*, at $1 a-year, we will present (if desired) **Ten Plants** of the **Triomphe de Gand Strawberry,** or an equivalent selection from other sorts that we may have, to be forwarded in August or September, according to their destination, as above stated.

PREMIUM II. For TWO subscribers, the same as Premium I, but **Twenty-five Plants**, or their equivalent, in other new choice varieties, instead of ten.

PREMIUM III. For THREE OR MORE subscribers, the same as Premium I, but **Fifteen Plants** or their equivalent in other varieties, for **each name.**

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AMERICAN AGRICULTURIST,

FOR THE

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July.

"Ye swains, invoke the powers who rule the sky,
For a moist Summer and a Winter dry:
For Winter drought rewards the peasant's pain,
And broods indulgent on the buried grain.
Hence Mysia boasts her harvests, and the tops
Of Gargarus admire their happy crops.
Then when the suns too fiercely play,
And shriveled herbs on withering stems decay,
The wary plowman, on the mountain's brow,
Undams his watery stores; huge torrents flow,
And rattling down the rocks, large moisture yield,
Tempering the thirsty fever of the field."—VIRGIL.

We are again amid the fervid heats of July, the hottest and oftentimes the dryest month of the year. One now only needs to look over the parched fields, especially in a dry season, to understand the need of irrigation. Even in seasons of average moisture we could use to advantage many times the quantity of water that falls from the clouds. It would always make the hay crop a certainty, and often quadruple the yield of grass in the irrigated fields. It was not strange that the Romans living under the bright skies of Italy, early found the advantage of damming their mountain streams, and turning them at pleasure upon the meadows below. It would seem from the account of Virgil, that whole districts were famous for the crops procured mainly by this method. Irrigation must have been an art well understood long before the Christian era. Is it not strange that in a climate quite as much subject to drouth as that of Italy, irrigation should be almost unknown among us? With a climate that demands it, and with unrivaled facilities for its practice, in most of the northern States, not one farmer in a thousand has availed himself of the treasures of water within his reach. Nothing could better show the neglect of agriculture among us as an art than this fact. Few people are more ingenious than ours, or more quick to take advantage of the facilities which Nature offers to save labor and to create wealth. We abound in all useful inventions and labor-saving machines. We dam streams to turn innumerable wheels for manufacturing purposes; to make fish ponds, and adorn our ornamental grounds; to make model lakes and raise our annual crop of ice, for the delight of Europe and the Indies. But how rarely is a stream turned from its course to fertilize the land and increase our harvests.

Few have any conception of the value of water as a fertilizer. Many turn the streams made by rains in the highways into the adjacent fields, but they attribute all the increased luxuriance of the grass to the matter deposited. No doubt street refuse, such as the rain washes into the meadow, is an excellent fertilizer, but the rain itself contributes to the result. Far beyond the line of deposit, you see the effects of the water.

Just how the water operates to fertilize the soil we may not be able to state. Of the fact there can be no doubt. We see the power of water to make crops in every drouth that comes. There are fields of light gravelly soil, whose crops of grass are nearly doubled in wet seasons. It is pretty safe to infer that water makes the difference. Water is a powerful solvent, and helps the decomposition, not only of vegetable fiber in the soil, but of its mineral constituents. You can not wash a stone so clean that water will not act upon its surface, and after a few hours wash away something more from it. It is probable that the water is all the while preparing plant food from the soil where it is present, and of course the more of it we pass through the soil, the more nourishment the roots of plants are enabled to take up.

We have recently examined two small valleys, flowed for skating during the winter, and drawn off in early Spring. In both you can detect the water line in winter by the greater luxuriance of the grass. Both streams that fed these ponds are dry, or nearly so, in summer, and never carry any very large volume of water. The basins that contain the water are small, and mostly covered with grass, so that they are rarely turbid even in rains. There is little appearance of sediment when the water is drawn off in the spring, and it is nearly certain that the beneficial effect is mainly owing to the presence of water in the winter season. If the water helps the grass crop under these unfavorable circumstances, it must help it much more when it bears a rich deposit, and is applied at the growing season.

We have in this State two examples at least, of the successful application of irrigation to farms—that of A. B. Dickinson, of Steuben Co., and L. D. Clift, of Putnam County; accounts of which were published in the Agricultural Transactions for 1855. In both these cases, the method is simple and the expense not beyond the means of most thriving farmers who have streams convenient for this purpose. In both, the results are all that could have been anticipated. The method is to dam the stream at a point above the lands to be watered, and to turn it on at pleasure, by means of a gate and channels of distribution. These main channels are furnished with side conduits which are merely furrows made with the plow and having just descent enough to carry the water. When the water is turned on these channels overflow, and the water is distributed over many acres.

Mr. Clift pursues his irrigation even in Winter, and it is this feature probably that will be looked upon with more hesitation than any others. The water freezes sometimes as it flows, making a broad field of ice a foot or more in thickness, where it remains until dissolved by the suns of Spring. It is probable that the ice affects the soil thus protected just as the ice-covered pond does. It is completely shielded from the alternate thawing and freezing; the frost does not strike in deeply, and comes out very early in the Spring. It is his testimony that "the grass in all such places is first in Spring, and grows with great rapidity." He also improves other seasons when the stream is charged with sediment, and spreads it over the land as a top dressing. Besides the sediment which is carried in the water, a good deal collects in the bottom of the pond, which is carted out when the water is drawn off, and makes excellent manure. This is spread upon portions of the field that receive the smallest supply of water. He cuts about a hundred tuns of hay on forty acres of land, which is certainly double the average for the mowing land of the state, and uses no other manure.

Mr. Dickinson makes great account of increasing the natural deposit of sediment by artificial means. He plows and harrows land that is to be overflowed, and stirs up the soil after it is under water to make it very muddy. Even the subsoil that is thus spread over grass land is found to be an excellent fertilizer. His grass crops are enormous, and the best possible commentary upon his method of irrigation.

Now we have thousands of farms all over the country quite as well, or even better situated for artificial watering than these. In many cases a few days' labor by the ordinary working force of the farm would make a pond and the necessary channels for watering a few acres. The work once begun would demonstrate its economy and lead to the watering of all the available portions of the farm. Lands that are now an encumbrance, hardly paying taxes, might be brought into a high state of productiveness. We call the attention of our readers to this very important topic at this season, when the scythe sweeps so many acres prolific in five-finger and briars, but poor in grass. Cheap and careless irrigation pays, and the more systematic and perfect it is, the better it pays, as a general rule. Use our streams rightly, and we shall find them richer than Pactolus, plowing over golden sands.

Calendar of Operations for July, 1862.

[A glance over notes like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 38° to 45°; but will be equally applicable farther North and South, by allowing for latitude.]

Farm.

Clear the deck for action. The great fight of the year is now close at hand—with many of our readers already begun. When the grass is fit to cut, haying must take the precedence of every thing else. The few days of cultivation that remain should be improved to the utmost. Keep the horse hoe and cultivator moving until the corn is too large to allow the horse to pass. Hoeing even to the time of silking pays. The stirring of the soil not only destroys weeds but admits air and moisture freely to the roots of plants. Cloudy days can sometimes be improved in hoeing, even to the last of this month.

It is miserable economy to undertake haying with a short supply of help. There is less need of it now that we have the help of the horse in mowing and reaping. The mowers and reapers have reached almost every neighborhood, and the small farmer who does not wish to buy a machine, can hire his work done with one. This saves the muscles and money at the same time. It puts the hay into the barn just at the time when it is worth the most for fodder. A single day of overwork, under a burning sun, sometimes lays a man up for a month. Hired labor will pay in the hay harvest, if at any time.

Barns and Sheds should be put in order immediately, if not ready to receive the new mown hay. There should be barn room enough for all the hay made upon the farm. As grain is now so generally thrashed soon after harvest, it is of less importance to put it under cover. If stacks must be built, make them very large, and remove them to the barn in the Winter for feeding out. We hope to see the practice of foddering at the stack-yard banished from the northern farm. It is hard on the cattle, and still harder on the farmer's purse.

Buckwheat—Sow a large breadth of this if there is likely to be any deficiency in the other grains. Read article on page 205.

Butter—Nothing requires nicer handling than this article. Perfect cleanliness in the utensils and thorough working, so that all the buttermilk is expelled, will add several cents a pound to the market value. A cool spring in the milk room is of great value in this business. Every dairy farmer ought to have an ice-house. With this he can always manage the temperature of the milk and bring his butter to market in the best condition. Sour milk and whey should be kept at a safe distance from the milk.

Cabbage should be more largely cultivated upon the farm. It is a good succession crop to early potatoes, and does well oftentimes, where from any cause the first crop fails. They may be planted at once in the hills where they are to grow, or transplanted from the seed bed a little later. It is of great value as a succulent fodder for cows, and will last well stored until Spring. It is excellent for pigs and poultry.

Cheese can be made where the facilities for making butter are not first-rate, or on farms too remote to admit of weekly marketing.

Draining is an item of business always on hand, when other things are not pressing. Drains are best laid in dry weather, and if we could have our choice of seasons we would always take Summer and Fall. Improve any leisure between hay and oat harvest to make drains. The proofs of the profitableness of this business are so clear when we have once begun, that it is rarely abandoned, until the farm is sufficiently drained.

Fences will need little attention, if they were thoroughly repaired in the Spring. The inclosed grain and clover fields will need looking after to guard them against cattle.

Grass and Clover Seed—Now is the time to secure clean seed of the best quality. You know what you raise. It is not always so clear what you buy, until it is too late. Select the cleanest piece of grass, clean out all the weeds, and you will have only what you want to grow.

Haying will commence in this latitude early in July. Begin with the clover and cut as the different fields are passing out of bloom. The indication of cutting time is, with many, when half the heads are turned brown. Clover makes the best hay in the cock, with only partial sun drying. Other grass is generally dried too much. With the hay caps, we may take our time in hay-making, and cure more in the cock, than we used to. Banish the whiskey jug and allow ample noonings. If stacks must be made, lay rails or other lumber to keep the hay from the ground.

Hay Mows—Ventilate by means of ducts, made by using grain bags filled with hay, set in the middle of the mow at the bottom, and gradually drawn up as the mow increases in hight, the hay being packed tight around them.

Hedge rows and bushes in pastures may be subdued by repeated cuttings in hot weather. The bush scythe is used to best advantage at this season.

Hoeing—Let no weeds grow among the corn, and substitute the horse for the man, as much as is possible, in destroying weeds. Keep the hoe and cultivator very near the surface, lest the corn roots receive damage.

Ladders for the hay mows and lofts, and stacks, should be provided, if not already on hand. They can be made on rainy days. Ladders and hay rigging for the cart, should be put in order. We do not want to repair a broken slat, or supply a missing stake, when a shower threatens, and a load of hay must come in within an hour or be drenched.

Manures—All kinds of vegetable matter, weeds and grass from the swamp and roadside, leaves from the woods, small brush and clods, sea weed and mud, make valuable manure. Gather every thing of the kind that is available, and put it in the compost heap. Either cut before the seeds ripen, or secure thorough fermentation, that there may be no foul seeds in the manure. Sinkspouts and privies will need looking after. There is waste wherever there is the smell of ammonia. Subdue it with plaster, muck, loam, or some other good absorbent.

Mowings—As soon as the grass is cut, spread fine, well rotted manure uniformly upon the surface. It is the best time to manure grass land. If it rains soon, the effect is very great, and at any rate, just as good as if applied at any other time.

Oats—Cut at early maturity, as directed for wheat and rye. Store where there is good ventilation and thrash early. The fall market is sometimes best for oats. At any rate, it saves the depredations of rats, which can not be prevented in the stack and mow.

Pastures—The great trouble is overstocking. They have no change, and no chance to recuperate. Corn, sorghum, rye, and other green crops fed out now, will save the pastures, and in the end secure more feed.

Poultry—Keep them from the grain fields until after harvest, then allow them to glean.

Potatoes—The ground should not be disturbed after blossoming until digging. Dig early varieties as they mature and sow turnips or set cabbages. There is ample time for a good crop of either if manure be used. There is often a difference of fifty per cent in the price of potatoes this month and the next—hence market early.

Rye—Cut before fully ripe, when the grain is passing out of the milky state.

Seed rye, Wheat, etc.—Save the best parts for seed, and leave until fully ripe. Remove all weeds and thrash with flails soon after harvesting.

Sheep—Give good pasture or sell a part of the flock. The profit is in well fed sheep. They can be made efficient helpers in subduing brush pastures. Goats are still better. Visit and salt weekly, and see that they have good water. Watch against the appearance of foot rot.

Soiling Crops—Sow millet and corn to be used for soiling late in the season. If not wanted green, it makes valuable dry fodder. Guard against a scant supply of food Summer and Winter.

Swine will find good picking in the grain fields after the crop is removed. Fleds and fat are made much more economically in warm, than in cold weather. Feed those confined in the pen with corn stalks, and other green fodder. Give water as well as meal. They want plenty of succulent food until frost comes.

Timber cut during this and the following months is considered more durable than that felled in Winter, particularly those kinds that abound in sap. Anticipate the wants of next season by cutting now.

Tanner's Bark—Hemlock and oak bark will "run" during most of July. Peel whenever leisure offers, if you have trees that need cutting. Shelter the bark as soon as it is sufficiently dry.

Tools—Examine before you begin to use them, and see that every nut and bolt is tight. Oil bearings and sharpen knives and cutting tools. Protect all tools from the weather. Improve rainy weather in repairs, painting, etc.

Turnips—Sow largely all vacant places where other crops are removed, and between the rows of corn. Transplant rock and French turnips. There is still time for a good crop. A spoonful of bone dust or superphosphate to each plant will make a crop on almost any tillable land. Cattle are very fond of all kinds of turnips, and thrive on them—the best proof of their value.

Weeds—The pest of the farmer, and the curse of slovenly tillage. Make war on them early and late. Give no quarter. Canada thistles, snapdragon, briars, high and low, live forever, wild mustard, dock and burdock, white weed and Johns-wort, wild carrot and daisies, their name is legion. Do not let one of them go to seed. Buckwheat is a good cleansing crop on foul land. Till thoroughly among all hoed crops. Cut grass early before the seeds of weeds ripen. Sprinkle salt on Canada thistles after the stalks are cut, so the cattle may crop them close.

Wheat—Cut as directed for rye. Keep the grain clean if intended for seed. It is a moral offence, dishonesty, to sell foul seed with the wheat. It justly affects the market price, even more than the cost of its removal.

Orchard and Nursery.

There is not much to be done in the orchard this month, if former directions given in the *Agriculturist* from time to time, have been followed. Early in July is a good time to prune both in the orchard and nursery. The rapid growth of new wood will soon heal over small wounds, and the wood will season firm and hard where large limbs are removed. Neglected orchards should by all means receive a good but judicious trimming now, and young trees will be improved in appearance and rendered more fruitful by heading back the new, luxuriant branches. Do not allow suckers about the trunks or on the limbs, to rob the trees of their needed food, and see that only the cions are allowed to grow in those branches which were grafted in the Spring. After trees have attained considerable size, it is better to keep the orchard under tillage, plowing lightly and harrowing frequently during the Summer, but do not depend upon a crop of anything but apples. The orchard is not often sufficiently manured to yield a crop of fruit, make a good wood growth for future bearing and give a crop of grain, corn, potatoes, or even grass beside. By no means allow a strong turf of grass to grow about the roots of young or newly planted trees; the grass will appropriate moisture and food needed by the trees.

Cherries are now ripe, and the crop is abundant in most parts of the country, too much so to warrant sending a long distance to market. Dry and bottle freely for Winter and Spring use. Save pits for nursery planting, mixing with earth in open boxes, and set them in an outbuilding or expose to the weather.

Thin the fruit of young trees, especially on the newly planted dwarfs. It is better to remove the whole from trees set last Spring, as the tax upon the vital powers of the tree caused by transplanting is quite sufficient without the extra effort required to perfect fruit.

The nurseryman will begin to bud plum, cherry and pear trees by the middle of the month. Use every precaution in securing true sorts, and mark the rows carefully. Insert the buds close to the ground. It is not necessary to remove the wood from the bud, except in budding on dwarf stocks. Stocks budded last season, may now be rounded off close to the growing bud. See that all suckers are removed. Read article on page 200.

Inarching may now be performed on both deciduous and evergreen trees. Layering is also in season, on old and new wood. With grape vines and other climbing or running plants use the new growth, while quinces and shrubby plants in general do better with wood of the previous season's growth.

Insects are now troublesome, unless they were kept in check as advised last month. Continue to dust plum trees with lime, or syringe with soap and water, or the mixture recommended on page 177 last month, to repel the curculio. Make friends of the birds, even if they do take a few cherries. This is the best season in which to destroy scale. The old shells have fallen off and the small dust-like specks, which are the recently hatched eggs, are readily removed by strong soap suds, or potash and water—one pound of potash to a gallon of water, applying with a scrubbing brush.

Plow or run the horse-hoe between the nursery rows, and use the hand-hoe to keep down weeds.

Kitchen and Fruit Garden.

It is a luxury to see things grow now. The change is visible from day to day. The peas are in their glory, the beans blossoming, the tomatoes full of green fruit, and the corn beginning to tassel. Follow up every department of the garden with the hoe and the watering pot. Make the most of the sink spout and other sources of liquid manure. Water newly set trees, and dwarf pears and grapes, keeping the mulch moist. Nothing will swell the fruit like liquid manure. Keep down the weeds and leave no spot vacant. We may as well have two or three crops as one.

Asparagus—The cutting season is over, and the plants should be stimulated, to repair the damage of the repeated cropping. Clear of weeds and give a good dressing of stable manure or compost, an inch or two thick.

Beans—Gather for use as they fill. Early beans may still be planted for a late crop of string beans, or for seed. They make an excellent pickle.

Beets may still be planted for Winter use. Hoe frequently, and thin to eight or ten inches in the row. They bear transplanting as well as a cabbage. Any surplus will be good for the cow and pigs, if not for greens.

Blackberries—Tie the new shoots to the trellis or stakes. Shorten in the main stem and branches to help the forming of fruit buds, and pull up small canes unless you wish to multiply them. Branches heavily laden with fruit should be carefully and securely tied up.

Cabbage and Cauliflower—Still sow and transplant for late crops. There is always a large home market for these and for turnips. If the stumps are left where the heads are cut for table use, a large amount of succulent food will grow for fall feeding.

Celery—Transplant until the last of the month for late crop. Hoe and water often. The more water the better, if there is good drainage. The excellence of this vegetable depends upon rapid growth. (See page 213.)

Corn—Still plant sweet corn for late use, and for drying. What is not wanted for the table, will find a ready market in the pig and cow yards.

Cucumbers may be planted for pickling. Guard against insects, and hoe and water until the vines cover the ground. Pickled cucumbers with good cider vinegar are wholesome, used in proper quantities.

Currants—Gather as they ripen and eat freely every day, from the bush and for dessert. They are one of the best safeguards against fevers and summer complaints. They should be ripe for jellies, and fully matured for wines and preserves. The bushes may be pruned, cutting out old wood as soon as the fruit is gathered. The juice preserved and bottled, makes the basis of a refreshing beverage. This fruit is so easily grown and is so healthful that every farmer should have a full supply. Watch against the currant aphis, scale, and the borer.

Egg Plants—Keep well hoed, and forward by stimulating manure, lest the frost cut them off.

Endives—Sow first of the month. (See article on p. 213.)

Espaliers, or trees trained to trellises or against walls are ornamental and more productive. They need to be pinched in, and where that has been neglected, superfluous wood should be cut out. Thin the fruit where much has set. Size and quality will both be improved.

Gooseberries are by far too rare in the farmer's garden. The first pickings make good sauce and pies. The later are fair eating from the bushes and at dessert. Keep mulch around them to prevent mildew.

Grapes—Continue to thin out and pinch back the shoots. Thin the bunches to one or two on a shoot. One gives the best fruit. A crop is frequently spoiled by the inexperienced, by leaving too much fruit to ripen. Also thin the bunches, removing small and imperfect berries. Keep the border free from weeds and all other crops. Grapes are enough for one piece of ground. Mulching and liquid manure are beneficial, until the fruit begins to turn. In Summer pruning, the new shoot that is to bear the fruit should be left to grow, until it is two or three leaves beyond the last bunch. From two to four bunches will set on a shoot if the vines are vigorous. Nip off the shoot at the third leaf beyond the last bunch, as soon as the berries are of the size of small peas. If the vines are young, not more than one bunch should be left to mature. In old vines two may be left, the lowest bunches. The uppermost bud in the axil of the last leaf will soon start. This should be left to grow a while, and then be pinched off, leaving but a single leaf. The bud by this leaf will start after a little while, and the pinching process is to be repeated. At the base of every leaf-stalk such shoots (called "laterals"—by the Germans, "thieves") may start, and if allowed to grow, will destroy the main bud, which forms at the base of each leaf. Treat them as directed for the leading bud. Pinching in the laterals ensures well matured buds for the next year's fruit, and though the process involves considerable labor, it secures the most perfect grapes.

Herbs—The best are dried in the shade, and preserved in boxes that will hold their aroma. Cut while in bloom.

Hoeing is a substitute for manure and water, and is always in order, until the plants cover the ground.

Insects require the constant attention of the gardener. They are alike destructive to fruits and vegetables, and should be trapped by all possible methods. Study their habits and experiment to destroy them. Encourage the presence of birds, toads and chickens. After this month chickens will do little harm in the garden, and will live mainly upon insects.

Lettuce is very refreshing at this season, and should be much more generally used than it is. Grow the kinds that head well, and still plant for a succession.

Manure all backward plants by top-dressings and manures in solution. You can drive a plant as easily as a pig, if you only know how. With plenty of manure, there is no need of a lagging garden. A shovelful of poultry droppings dissolved in eight gallons of water will make a good persuasive to all reluctant plants.

Melons—Cultivate as cucumbers. Put a board or flat stone under them as they grow large.

Mushrooms—Prepare the materials for late beds, according to former directions. See article on page 213.

Onions—Weed and cultivate without drawing the dirt around the bulbs. If the maggot trouble the plants, try a weak solution of oil soap, say a pound to eight gallons of water. Apply with a watering pot. Thin the plants, if you desire very large onions. Seed may still be sown to provide very small bulbs for planting next Spring.

Peas—Sow for late use, if your vines do not mildew late in the season, and if you desire peas amid the profusion of Autumn fruits and vegetables. We have never found late peas very much appreciated. Save the best pods for seed, and pick as soon as dry. Clean up the pea ground as soon as the vines grow yellow, for turnips or other late crops.

Potatoes will have nearly got their growth this month. Plant cabbage or turnips between the rows at once, or clean the ground when all are dug, for spinach and other late crops.

Preserving fruits and vegetables. Read articles in last and other numbers, and lay in a full supply. Fruits can now be made a cheap luxury the year round. They are much cheaper than pills.

Raspberries—Cut down old canes as soon as the fruit is gone, and thin out the new ones, unless you want to multiply them. Three or four canes to a stool is enough. Keep the ground around them well hoed, but do not disturb the roots.

Rhubarb has had its season, and now that fruits are getting plenty it may be left to recuperate if it has been hard plucked. If fruit should be scarce, it may be preserved in the same manner, or dried in the same way as apples. The late growth also makes a good wine, if that name is proper for any thing but the juice of the grape.

Seeds—Pay strict attention to sowing the seeds of cabbage, turnips, and all plants that mature early. After the pods begin to turn yellow, they will ripen more securely in the house, or under some shelter.

Strawberries—After bearing is over, weed the beds, and cut the runners that are not wanted for new plants. Prepare new beds, making them deep and rich, where you want them to last for several years. Most varieties do best in hills in the garden. With liquid manure they will do well on quite poor soil.

Thinning is generally very much needed among carrots and all the root crops—among melons and fruits. One good fruit or vegetable is worth many poor ones.

Tomatoes—Some recommend training to trellises and on brush. They ripen quicker on the ground, and for this reason we let them follow their bent. Pinch off the ends of the branches, and keep them within bounds. They will make better fruit.

Transplant to fill vacancies every where. A good deal may be done to remedy poor seed, or the ravages of insects this month. This can be done in the hottest weather with a little skill.

Weeds are not useful or ornamental. Keep the hoe and cultivator moving, and the garden clean as a parlor.

Flower Garden and Lawn.

As too frequently cultivated there is a dearth of flowers in July. Many of the early bedding and other plants, including the bulbs, lilies, peonies, dicentra, roses, etc., are nearly out of flower, and it is too early for the annuals, and for dahlias, gladioluses and other Autumn bloomers. The chief reliance must now be upon the verbenas, petunias, fuchsias, heliotropes, pinks, geraniums, hollyhocks, tall phlox, salvias, some of the remontant roses, etc. By drawing freely upon the potted plants of the green-house, the list may, of course, be much extended, but a good assortment of the above will make a fine show until relieved by later flowers.

A few of the quick growing annuals will flower late in the season if sown early this month. The perennials may properly be sown now for blooming another year.

Bulbs which are to be reset this season should be taken up and dried at once. Label them and wrap in papers or pack in dry sand until Fall, when they are to be planted.

Climbing plants will need regulating to keep them within due bounds. Do not allow those which are to be laid down for Winter, to become too much entwined about the trellis, or run through the lattice. Train them carefully upon one side.

Dahlias, gladioluses, etc., should be well staked and tied to prevent breaking down by high winds. Cut off a portion of the side shoots of the dahlia. One stalk is better than several. Look for and destroy borers, which often penetrate the stalk at this season.

Evergreen and other hedges should be clipped early this month, if it was not done in June. Single evergreen trees may also be pruned to advantage, especially if they are to be kept in a bush or shrub form. By no means destroy their beauty by trimming to a naked stem. They should always branch close to the ground.

Roses will still require some care to keep off that troublesome pest, the slug, which eats the leaves until they look like skeletons. A few good sprinklings and syringings with 1 lb oil soap mixed in 6 gallons water will effectually rid the bushes from these pests. The rose bugs will not fancy the application. Remove the flower stems as soon as the bloom has fallen. By cutting back freely a late bloom is often secured.

Lawns and Grass Edgings—Mow or shear once a fortnight, to keep a thick, green bottom. If the short grass is left evenly spread upon the surface, it serves to protect the roots from the sun, is soon hidden by the new growth, and its decay eventually enriches the soil. Do not let the turf encroach upon the flower borders, or grow too closely around newly planted, or even established trees. If suffering from dryness, a hydropult, or other sprinkler, may be used to advantage, sprinkling with the waste wash water, or with liquid manure, well diluted with water if it is dark colored and strong.

Verbenas should be pegged down as they extend their growth, until they form a perfect mat.

Water must be given occasionally to trees and shrubs set in the Spring, also to herbaceous plants. Frequent stirring of the ground will do much toward bringing up moisture from the soil, and it assists in absorbing dews. As often applied, water does little good; a pail of water dashed upon the ground soaks in very little, while it helps to bake the soil. Scoop out a hollow about the tree or plant, pour in the water, and when soaked in, return the surface soil.

Weeds are very apt to run up and go to seed under the cover of plants of similar foliage; of course they will not be tolerated by good gardeners.

Green and Hot-Houses.

These houses are nearly empty now, and require very little attention. Those containing tropical and other plants which can be better controlled than if set in the open ground, should be well cared for, one of the first requisites being frequent sprinklings and syringings with water. Evaporation is very rapid during the heat of Summer, and water should be given at least three times a week, not a mere sprinkling either, but a thorough soaking, which will do no harm, provided the drainage is good. Propagators prefer a glass structure in which to strike cuttings for increasing their stock. They can better regulate light and shade, heat, moisture, etc., and usually devote one house to this purpose, even in Summer. It is now time to put in cuttings of most plants intended for Winter flowering. The old and overgrown specimens should give place to new and vigorous plants which the skill of the florist easily produces from the parent stock.

Grapery and Orchard-House.

From the present time to the full ripening of grapes peaches, nectarines, etc., care is necessary to check unnecessary or wild growth, to secure a perfect ripening of the wood which it is intended to preserve, to prevent mildew and ripen the fruit. There must be a good supply of foliage beyond the fruit, and in good light. The fruit need not be in the sunshine, but is better if shaded by its own leaves. This is particularly true of grapes, the skins of which are thickened by the action of the light. Thin out the branches even among the smaller berries. Look out for and remove shriveled, spotted or mildewed berries, tie up shoulders of clusters by strings to the wires or rafters. Use sulphur flowers freely upon the fruit and foliage. Withhold superfluous water during the formation of the stones in stone fruits and the seeds in grapes gradually increasing the supply again after they have become firm. Summer pruning, pinching, etc., must always be done with reference to that part of the current year's growth which is to be permanent, and with reference to the production of fruit buds for the next year's crop.

Apiary in July.

Prepared by M. Quinby—by request.

In this month, the bees usually obtain their best stores. If the colony is strong, their combs are soon filled to overflowing. A large portion at this time, should contain brood, but when honey is abundant, and store room limited, the comb which may contain brood, is apt to be much reduced, so much so that, in some instances, when cold weather comes on, the colony is quite too small. The Italians, particularly, are apt to fill up with honey instead of brood; but as they are longer-lived than the black bees, the effect is not so disastrous. A hive stored to its utmost capacity is not in as good condition for Winter as one that has a portion of its cells empty. The use of surplus boxes, then, is not only an advantage in secur-

ing honey, but a benefit to the bees. During the yield of honey, the full boxes should be changed for empty ones as fast as filled. In getting the bees from the boxes, much honey is often lost by the ordinary methods recommended. As long as flowers yield honey plentifully, it will do to set the full boxes down by the hive, in the shade of some tree or out-building, or in a darkened room with a small crevice to let out the bees. But as soon as it is scarce, the boxes so left are sure to be robbed. One man put nearly his whole crop in the barn, shut the doors, and went off to his work. On his return at noon, he found his boxes empty. The utmost care and some skill are required on some occasions—especially with Italians—to get rid of the bees, and save the honey. The directions hereafore given in the *Agriculturist* are probably as effectual as any simple arrangement. Take an empty bee-hive, put in the boxes on their sides, combs vertical, in such a way that the bees may creep out of all. Throw over them a sheet, that no bees may get in or out. After standing a little time, the bees, in their endeavor to escape, will get on the under side of the sheet, when it may be turned over; by repeating this a few times all may be disposed of. Bees in this way will not sting, unless provoked at first. To save the honey through the hot weather, put it in a dry place, and cool, if possible, to prevent the moth eggs from hatching. Paper or cloth may be pasted over the bottom to keep out moth and other insects.

Boxes should stand the same side up as they did on the hives. Swarming seldom continues later than the middle of this month. It is unnecessary to watch a hive for swarms later than eighteen days after the first one issued from it, although bees enough may be counted out for two. When done swarming, notwithstanding all care to supply queens to old stocks as they are lost, there will be some queenless ones yet to be supplied. Ascertain as early as possible which they are. With the movable combs it may be known in a week or two by examining combs for eggs or brood in the cells; but with the box hive, it may be three or four weeks before it can be ascertained. There must be sealed broods before it can be seen, and by this time, when they happen to be destitute, the colony is often reduced too much to swarm, if they have to rear a queen. A few very small late swarms should be hived to have queens on hand to supply these with a laying queen at once. There is a gain of three weeks' time in breeding, over raising one from brood, and the difference, perhaps, of saving or losing the colony. One who has taken no pains to ascertain how quickly a swarm of bees die off that have no queen, can not realize the importance of her presence with a supply of eggs.

When combs have become eight or ten years old it is well to prune out, and let the bees construct new. To avoid waiting brood unnecessarily, which is so important as honey for the prosperity of the hive, it should be done three weeks after the first swarm. Take just time enough to get through before dark. Drive out the bees as directed for transferring combs, and set them on the stand until their own is returned. Take out all the black combs in the center of the hive that have been used for breeding, leaving those at the top and sides where they are seldom used for brood; they are usually filled with honey, and are a good start for refilling the hive. A moderate sized colony will always fill up without this help. Invert the hive containing the bees and set the other over. The bees will take up all the dripping honey, and be in the upper hive by morning, when they may be set on the old stand. Three weeks after the first swarm is also the best time to examine for diseased brood. If found, pruning is not sufficient; the colony must have a *clean, empty* hive. If foul brood is discovered *at any* season, when honey is to be had, the bees should be put into an empty hive; if they get enough for Winter, it is well, if not, feed them, or, take out the bees in the Fall, and save the contents as a beginning for some swarm another year.

There are more moths about the hives this month than in any preceding month of the year; and there are more chances of their finding places for depositing their eggs. Very small swarms, old stocks that have swarmed freely, and but few bees left to protect the combs; and above all, queenless stocks, afford great inducements to the moth to deposit her eggs. Although a few worms may not destroy the colony, they will injure a weak one much more than a strong one. The number that destroys one, might hardly injure the other. Ascertain which are weak and by frequent examinations, assist in destroying the worms. Strong colonies will do without much help. Put old pieces of comb under the hives that are part fall; take out once in two or three days, and kill the worms that have gathered in them. Set shallow dishes containing sweetened water near the hives at night; hundreds will get drowned.

Wild Bees.—A correspondent inquires, "How wild bees in a hollow log may be transferred to other hives?" In the same way as bees are transferred from one hive to another, namely, by drumming them into a box or hive set above them upon the log, inverted, if possible, as one hive would be set upon the top of another inverted hive. The comb, after the bees are out of it, may be cut out, and fastened into frames, or inserted in the hive, in which the bees are to be put. Follow directions as given by Mr. Quinby in Apiary for previous months.

Exhibition Tables at the Office of the American Agriculturist.—

The following articles have been presented since last report:

FRUITS, ETC.—Lancaster Greening Apples, from W. Miller, jr., Carlisle, Pa.....Lychee fruit, (Nephelium litchie) from China, from D. C. Eaton, N. Y.....Apples for name—Campbell," from J. G. Holbrook, Chappaqua, N. Y.... *Strawberries.*—From Mr. Pell, Infant Orphan Asylum, N. Y.....Hooker's Wilson's and Triomphe de Gand, in pots, from C. S. Pell, N. Y., Orphan Asylum.....Wilson's and Austin Seedlings, in moss only, from J. C. Thompson, Staten Island....Longworth's Prolific—fine—from Mrs. Alston, Brooklyn, N. Y.....Triomphe de Gand and Wilson's, from J. C. Thompson, Staten Island.

FLOWERS, ETC.—Rodanthe Manglesii, Arocclineum Roseum, etc., in bloom, from O. Judd, Flushing....Cut flowers, from A. Cummings, N. Y....Ditto, from Mr. Westcott, N. Y.....Ditto from A. S. Fuller, Brooklyn Nurseries.....Ditto from J. C. Thompson, Staten Island.....Salvias in variety, Veronica Speciosa, Pentstemon ovatus, Lupinus polyphyllus, Dictamnus fraxinella, Spiræa, Iris, etc., Geraniums, Petunias, Petalonia, etc., from O. Judd, Flushing, L. I. ...Branch of Wistaria, from Mrs. Hall, Williamsburg, L. I.

VEGETABLES, SEEDS, ETC.—Desiccated vegetables—Cabbages, Onions, Potatoes and Carrots—from the N. Y. Desiccating Co., by Mr. Estus Woodbury, N. Y.....Cucumbers grown on 12 rods of ground, from Jas. Wilkinson, Minneola, Kansas....Corn from three ears—weigh 23 ounces—from J. C. Cooke, Newport, Vermilion Co., Ind. ...Contraband Sweet corn—black, very curious, and said to be very early—from J. Conklin, Dobbs Ferry, N. Y.....Early Short Prolific Cucumber, April 1, and gathered June 9)—fine—from G. M. Usher, Port Richmond, L. I. Chinese Sugar Cane head, from N. N. Hartwell, La Harpe, Hancock Co., Ill.

IMPLEMENTS, ETC.—Model of Halsted's Corn and Potato Marker, from A. M. Halsted, Rye, N. Y.....Hostetter's Big Bale Cotton Conveyer, from A. R. Hoffer, Mt. Joy, Pa....Sheep Label, H. G. White, So. Framingham, Mass.

MISCELLANEOUS.—Pair of stuffed Moles—very large—from W. F. Heins, Woodstock, N. Y.....Swan, stuffed by J. L. Bode—from Mr. Lillienthal, N. Y.....Striped Jace and Crawfish, for Aquarium, from C. E. Wheeler, Orange, N. Y.....Egg of Bramah fowl—very large and heavy, length 3 inches, breadth 2 inches, weight 4 ounces—from Jno. M. Oakley, N. Y.....Red currant wine—very fine—from Mrs. Hall, Williamsburg, L. I.....Yorktown Slingshot, from Mr. Malcolm Forbes, Yorktown, 90th Regt. N. Y. Vols.....Piece of Plantain Tree, from G. E. Willet, Caracas, S. A.....Address Printer, W.M.Doty.

The "Homestead Act."

[The following important act having passed both Houses of Congress, was signed by the President May 20th, 1862, and is consequently in full force. Its provisions are important; they are so clearly stated in the Bill as to need no explanatory comments.]

AN ACT to Secure Homesteads to Actual Settlers on the Public Domain, and to Provide a Bounty for Soldiers in lieu of Grants of the Public Lands.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress Assembled: That any person who is the head of a family, or who has arrived at the age of twenty-one years, and is a citizen of the United States, or who shall have filed his declaration of intention to become such, as required by the naturalization laws of the United States, and who has never borne arms against the United States Government, or given aid and comfort to its enemies, shall, from and after the 1st of January, 1863, be entitled to enter one quarter section, or a less quantity, of unappropriated public lands, upon which said person may have filed a pre-emption claim, or which may at the time the application is made, be subject to pre-emption at $1.25, or less, per acre; or eighty acres or less of such unappropriated lands, at $2.50 per acre, to be located in a body, in conformity to the legal subdivisions of the public lands, and after the same shall have been surveyed: *Provided*, That any person owning and residing on land may, under the provisions of this act, enter other land lying contiguous to his or her said land, which shall not, with the land so already owned and occupied, exceed in the aggregate 160 acres.

SECTION 2. *And be it further enacted*, That the person applying for the benefit of this act shall, upon application to the Register of the Land Office in which he or she is about to make such entry, make affidavit before the said Register or Receiver that he or she is the head of a family, or is twenty-one years or more of age, or shall have performed service in the army of the United States, and that he has never borne arms against the Government of the United States, or given aid and comfort to its enemies, and that such application is made for his or her exclusive use and benefit, and that said entry is made for the purpose of actual settlement and cultivation, and not either directly or indirectly for the use or benefit of any other person or persons whomsoever; and upon filing the said affidavit with the Register or Receiver, and on payment of $10, he or she shall thereupon be permitted to enter the quantity of land specified: *Provided, however*, That no certificate shall be given or patent issued therefor until the expiration of five years from the date of such entry; and if, at the expiration of such time, or at any time within two years thereafter, the person making such entry—or if he be dead, his widow; or in case of her death, his heirs or devisee; or in case of a widow making such entry, her heirs or devisee, in case of her death—shall prove by two credible witnesses that he, she, or they have resided upon or cultivated the same for the term of five years immediately succeeding the time of filing the affidavit aforesaid, *and shall make affidavit that no part of said land has been alienated and that he has borne true allegiance to the Government of the United States*; then, in such case, he, she, or they, if at that time a citizen of the United States, shall be entitled to a patent, as in other cases provided for by law: *And provided further*, That in case of the death of both father and mother, leaving an infant child, or children, under twenty-one years of age, the right and fee shall enure to the benefit of said infant child or children; and the executor, administrator, or guardian may, at any time within two years after the death of the surviving parent, and in accordance with the laws of the State in which such children for the time being have their domicil, sell said land for the benefit of said infants, but for no other purpose; and the purchaser shall receive the absolute title by the purchase, and be entitled to a patent from the United States, on payment of the office fees and sum of money herein specified.

SEC. 3. *And be it further enacted*, That the Register of the Land-Office shall note all such applications on the tract books and plats of his office, and keep a record of all such entries, and make return thereof to the General Land-Office, together with the proof upon which they have been founded.

SEC. 4. *And be it further enacted*, That no lands acquired under the provisions of this act shall in any event become liable to the satisfaction of any debt or debts contracted prior to the issuing of the patent therefor.

SEC. 5. *And be it further enacted*, That if, at any time after the filing of the affidavit, as required in the section of this act, and before the expiration of the five years aforesaid, it shall be proved, after due notice to the settler, to the satisfaction of the register of the land office, that the person having filed such affidavit shall have actually changed his or her residence, or abandoned the said land, shall have failed to occupy said land for more than six months at any time, then and in that event the land so entered shall revert to the Government.

SEC. 6. *And be it further enacted*, That no individual shall be permitted to acquire title to more than one quarter section under the provisions of this act; and the Commissioner of the General Land Office is hereby required to prepare and issue such rules and regulations, consistent with this act, as shall be necessary and proper to carry the provisions into effect; and that the registers and receivers of the several land offices shall be entitled to receive the same compensation for any lands entered under the provisions of this act that they are now entitled to receive when the same quality of land is entered with money, one-half to be paid by the person making the application at the time of so doing, and the other half on the issuing of the certificate to the person to whom it may be issued; but this shall not be construed to enlarge the maximum of compensation now prescribed by law for any register or receiver: *Provided*, That nothing contained in this act shall be so construed as to impair or interfere in any manner whatever with existing pre-emption rights: *And provided, further*, That all persons who may have filed their applications for a pre-emption right prior to the passage of this act shall be entitled to all the benefits of this act. *Provided further*, That no person who has served, or may hereafter serve, for a period of not less than 14 days in the army or navy of the United States, either regular or volunteer, under the laws thereof, during the existence of an actual war, domestic or foreign, shall be deprived of the benefits of this act on account of not having attained the age of 21 years.

SEC. 7. *And be it further enacted*, That the fifth section of the set entitled "An act in addition to an act more effectually to provide for the punishment of certain crimes against the United States, and for other purposes," approved the 3d of March, in the year 1857, shall extend to all oaths, affirmations and affidavits required or authorized by this act.

SEC. 8. *And be it further enacted*, That nothing in this act shall be so construed as to prevent any person who has availed himself of the benefits of the first section of this act from paying the minimum price, or the price to which the same may have graduated, for the quantity of land so entered at any time before the expiration of the five years, and obtaining a patent therefor from the Government, as in other cases provided by law, on making proof of settlement and cultivation as provided by existing laws granting pre-emption rights.

Preserving Fence Posts.—Fences are in most parts of the country, and particularly at the west, still a necessary nuisance, and when once has grown expensive of fencing a country has been incurred, it is a great evil to have the posts rot away so that 10 per cent has to be renewed every year. Several systems of saturating timber with metallic salts have been found to preserve it for many years, but are liable subjected to the influences most favoring decay. The use of corrosive sublimate was early suggested and the process called Kyanizing after Mr. Kyan, the discoverer of the process. Other deleter salts have been recently and quite effectually employed, particularly sulphate of iron (green vitriol), sulphate of copper (blue vitriol), and chloride of zinc, the last called burnettizing. Posts are most perfectly prepared when placed in weak solutions of the salts in air tight chests, the air being exhausted by a steam or air pump, and again let in, the pores of the wood from which the air was withdrawn, are at once filled with the solution. Timber may also be prepared in open tanks by using very dilute solutions and gradually increasing the strength, from 1 to 3 pounds of the salt to 10 gallons of water. (See also p. 198.)

Containing a great variety of Items, including many good Hints and Suggestions which we give in small type and condensed form for want of space elsewhere.

Note to Crop Reporters.—Each one who furnishes a report will greatly favor us by putting the *Register number* which is in the first column of the table against his report, on the face of each blank returned.

The reports generally were received in good time, but a few came too late, and several we were only able to insert on account of a delay caused by the Strawberry Show. Some reporters omitted to give their names or residence, State, County, etc. Such reports are useless.

Full notes of prominent crops not named in the blanks, carried out in figures like the others, are very desirable.

Strawberry Premiums.—It is hardly necessary for us to direct attention again to the Strawberry Plants we offer on page 224 as Premiums for subscriptions to the *American Agriculturist*. A better opportunity to secure plants of these famous varieties can not occur.

Agriculturist Strawberry Show.—We have delayed our issue a little to be able to tell our readers about the Show of Strawberries at the Office of the *Agriculturist*, and can briefly report a most gratifying success. The Exhibition was large, the number of varieties very extensive, including many *very* valuable seedlings, and the size and quality of the fruit unsurpassed. Probably all kinds are a little larger than usual, owing to the cool, cloudy weather and rains, but this has added to their size. The principal exhibitors are Messrs. A. G. Marshall, Poughkeepsie, N. Y., 52 varieties. Prince & Co., Flushing, N. Y., 65 varieties, (not early enough or of sufficient quantity each, for competition.) Mr. Wm. F. Heins, Woodstock, N. Y., (amateur) 22 varieties. A. S. Fuller, Brooklyn, N. Y., 10 varieties, including 4 choice seedlings. E. Williams, W. Bloomfield, N. J., 28 varieties. J. Drummond, gardener to Mrs. J. H. Strong, Newtown, L. I., J. B. Colgate, Glenwood, Mr. Pell, N. Y. Orphan Asylum, William Shaw, and J. C. Thompson, both of Staten Island, besides many others showing less than 4 kinds each. The Show of new seedlings was especially fine. Our next number will contain engravings of some of the most notable kinds, and a full report. The awards made by Dr. I. M. Ward, of Newark, P. B. Mead, Ed. Horticulturist, R. G. Pardee, New-York, and Lowell Mason, jr., Orange, N. J., were as follows:

PREMIUMS AWARDED.

Largest Number of approved Varieties. E. & G. Marshall, Poughkeepsie, N. Y. $10

Second largest do., Wm. F. Heins, Woodstock, N. Y. $5

Best dish of Market berries, Wilson's Albany, E. & G. Marshall, Poughkeepsie, N. Y. $5

Best dish for General (Family) Cultivation, Triomphe de Gand, A. S. Fuller, Brooklyn, N. Y. $5

2d. do., Ward's Favorite, W. H. Goldsmith, Newark, N. J. $3

3d. do., Longworth's Prolific, Wm. Shaw, Clifton, S. I., N. Y. $2

Best three largest berries of one variety, (Triomphe de Gand,) weight 2 ounces, Wm. F. Heins, Woodstock, N. Y. $3

Best New Seedling. (Brooklyn Scarlet.) A. S. Fuller, Brooklyn, N. Y. $3

2d. best, (Large, high flavored and handsome), No. 8 B. W. A. Burgess, Glen Cove, N. Y. $2

High Commendation of No. 8 C, for size, good quality, and productiveness. W. A. Burgess, Glen Cove, N. Y.

Best Quart White Strawberries, Bieton Pine, John Drummond, Gardener to Mrs. J. H. Strong, Newtown $2

Best Quart best Flavored, Seedling No. 8 D. W. A. Burgess, Glen Cove, L. I. $2

Best Quart Triomphe de Gand, W. F. Heins, Woodstock, N. Y. $1

Best Quart Hooker, W. H. Goldsmith, Newark, N. J. $1

Best Quart Hovey's Seedling, $1.—Not awarded.

Best Quart Victoria, J. B. Colgate, Glenwood, N. Y. $1

Best Quart Wilson's Albany, Wm. Shaw, Clifton, S. I., N. Y. $1

Best Quart Jenny Lind, John Drummond, Gardener to Mrs. J. H. Strong, Newtown, N. Y. $1

Best Quart Vicomtesse Herlaent de Thury, E. & G. Marshall, Poughkeepsie, N. Y. $1

Agricultural College Act.—Congress has finally passed an act by a generous majority, giving to every State 30,000 acres of land for each Representative and Senator in Congress, according to the apportionment by the census of 1850, conditional to the acceptance of the grant by any State within two years, and the founding of at least one College where Agriculture and the mechanic Arts shall be the leading studies, not excluding others. We shall have more to say upon this Act. A similar bill has been before Congress for some years, known as the Morrill Bill, and the honor of having carried this through belongs to Hon. J. S. Morrill, of Vt.

Dyed in the Wool—A Curious Phenomenon.—Through the kindness of the Editor of the Pontiac Jacksonian, we have received a sample of Merino wool, of good quality, clipped from a pure blood Merino ewe, owned by Mr. Robt. Perry, of Oakland Co., Mich. This wool is remarkable for growing of different colors. The outer end of the locks sent is dark brown (what would be called *black*), ½ inch—then ½ inch is white, next about 3-16ths black, white, black; then follows nearly ¾ of an inch of white, and following this fully ¾ of an inch of jet black, then ¾ of an inch of white, followed by a slight shade of black, which was the growing color at the time the lock we have was clipped. The entire length of the wool is 2½ inches. The black is the healthiest wool, having the best curl. This interesting phenomenon should receive skillful and careful investigation, that the cause may be known. It is no accident.

To California Subscribers.—With this issue our subscribers in California, Oregon and Washington Territory, will commence receiving the *Agriculturist* by the steamer. This we hope will insure regularity and certainty of delivery. Since the newspaper mails have been made up for the overland route, we have had continual complaints of a failure to receive our journal. The fault has been not in the issue our own, but we are willing and desirous to supply missing numbers, and will do so to all who notify us. It is gratifying to know that notwithstanding the irregularities of the mails, our Pacific list has been well sustained, and we now hope, with regular newspaper mails, soon to address a still larger audience on those peaceful shores and among the wine and gold bearing hills and valleys.

Per Steamer to California.—A number of inquirers ask for information respecting the California Steamers, etc. The only regular line of Steamers now leave this port for the Isthmus on the 1st, 8th, 16th and 24th of each month. Time through to San Francisco, 21 to 23 days. The through fares vary from time to time. They are now: In Deck State room, $225; First Cabin, $200; Second Cabin, $150; Steerage, $100. For further particulars, fares at any time, etc., address only D. B. Allen, No. 5 Bowling Green, N. Y. City.—*and don't buy tickets of any other person.*

Rogers and Gest's Ammoniated Superphosphate.—NOTE FROM DR. PUGH, to the Editor of *American Agriculturist*.—DEAR SIR,—The manufacturers of the above manure, fear that what I have written you in relation to it, will lead the public to suppose that they sent me the first specimen we analyzed (worth about 3 times as much as the last), with a view of having me attach a higher value to their manure than it deserved. It is but just to them to say that previous to the publication of the first analysis, I never had any communication with them, nor did they know anything about our intention to analyze their superphosphate. EVAN PUGH.

Agricultural College, Pa., June 24, 1862.

Wines—American and Foreign.—It is certain that a very much larger quantity of wine is sold in this country than grows or is imported. Great quantities besides of the juices of other fruits, cider, currant wine, blackberry wine, huckleberry juice, etc., are used as the bases of imitations of wine, and sold and drank as such, to put no estimate upon the quantity of the very deleterious compounds of logwood, sugar of lead, and alcohol with other drugs, made to look and taste like port, claret, etc. Moreover, in the wine growing regions of our own country, the fact is notorious that all the bodies of sugar and water to the expressed juice or to the pulp and skins of the grapes, are of a character to double or triple the products of some vineyards. Wine will be used, and any facts which will prevent the public from being made known. Stringent laws would be equally advantageous to the importer, producer, and the consumer.

Tool Chests.—See premium list in March and April Nos. We take pleasure in directing attention to these valuable premiums. They are from the factory of Geo. Parr, of Buffalo, N. Y., and are well worth the trouble of obtaining as a premium. How much labor is saved by having an implement at hand to do any little matter at the moment—irrespective of the satisfaction of being able to accomplish it without the aid of a mechanic, and it is of inestimable value to any boy to have a knowledge of the use of tools a part of his education. How many shall we send out before the long Winter evenings are upon us? Forty-three subscribers for a $20 tool chest, and a smaller number in proportion for chests of less value.

The American Pomological Society holds its 9th biennial session in Boston, beginning on Wednesday, Sept. 17th, at noon, to continue several days. The biennial fee for membership is $2. Delegates are invited from all State and other Horticultural and Agricultural Societies. The catalogue of fruits is to be revised, and all intrusted with making reports for their localities are requested to forward them without delay to Mr. P. Barry, Rochester, N. Y.

Fancifully Colored Fruit.—It is a practice in Austria and some other parts of Europe to put various arrowroot and similar fanciful designs upon fruit. It is done by cutting the figures out of opaque paper, and covering the ripening fruit with the paper. The parts of the apple or pear exposed to the light will take the natural blush or red color, while those shaded by the paper become quite white, or light colored. Such fruits, if the designs are beautiful, bring large prices.

Which is the Best Botany?—"J. W. H.," Middlebury, Mass., without doubt "*Gray's Manual*" of botany is the best for students or for a hand-book. It is accurate, contains more plants than others, the names are spelled rightly, the descriptions are clear, mere varieties are not magnified into species, and so far as concerns the flora of the Northern United States east of the Miss. River, Virginia, and Kentucky, it is very complete. A new edition has lately been published by Ivison & Phinney, New-York, in which, besides other important and valuable addenda, 96 pages are added to the exotic plants of the Farm, Garden, shrubbery, lawn, and green-house. Bound in the same covers is Gray's first lessons in Botany. Price of the whole, in one volume, $2.25.

Salt-water Manure for Cabbages.—A farmer who has tried it, states that a weak solution of salt-water—about fifteen grains of salt to each pint of water—sprinkled upon growing cabbages two or three times a week, improves them materially, especially in heading, rendering the heads more solid and heavier.

Growing Celery.—A subscriber succeeds marvelously by raising it in a spent hot-bed—plants five or six inches apart—sides of bed deep. Water as the plants need, and trim the tops three times during Summer. They are blanched in a box in the Winter by moving in the cellar and covering the plants with dry dirt.

Seeds, Plants, & Cuttings by Mail. The law is one cent an ounce, or any fraction of an ounce—for fifteen hundred miles—ten cents for greater distances. Eight ounces is the limit of the package that may be sent. If the Postmaster makes a fuss about sending grafts and seeds, his neighbors should write to headquarters. Uncle Sam is ready to help them.

Peach Culture—Information Wanted.—There is great need of more information on the culture, diseases, etc., of this luscious fruit. We offered a prize for the best essay, but have received nothing of sufficient value to be published as a prize article. We solicit information from those who can speak from experience and observation.

Strawberry and Fruit Culture.—"E. McC.," Ohio. The business will pay anywhere, if there is a good market, and skill in the cultivator. The business grows upon one's hands generally after it is started. The beginner will of course have to pay for his education, and this item must be taken into the account in estimating the profits of the business.

To make Vines Fruitful.—Melon, cucumber, squash, and other vines of this class, are often rendered more fruitful by the pinching-in or shortening-in process. Pinch off the ends of the longest, and thus throw more strength into the lateral, bearing branches.

Cranberries.—"B.," of Cumberland, R. I., has an acre of meadow, with muck from eight to sixteen inches deep, underlaid by stiff clay, and wishes to change it into a cranberry patch, at the least expense. There are various ways of doing the thing. The muck should not be removed. If situated so that the meadow can be flowed in Winter it is desirable, though not essential. The present vegetation may be killed by draining, or by cutting with potatoes a year or two. Cut a ditch quite around the edge of the swamp. When the sods are decayed and the surface is free from weeds and grass, plant the vines in rows, and cultivate a year or two until they get full possession. They can be planted in the grass in sods, but it would be a long while before they would cover the ground. B. should visit a successful cranberry grower in his region—E. Bagley, of Usquepaug, R. I., for instance.

Pegging down Roses.—A writer in the Gardener's Monthly recommends the pegging down of moss and other roses, so as to cover the ground with their foliage and flowers. With some sorts the effect is very fine, and the bloom fuller and continued longer. It is a little harder to keep the bed clean and the ground loose.

Honey Locust Hedges.—From what we have seen of this plant put to this use we do not favor it, except for a farm fence, and for this purpose its roots run too near the surface. If well trimmed, forced to branch low, and not allowed to take the table-top shape, which is the natural habit of the tree, it will make a coarse, stout hedge. It needs light and air, otherwise the leaves fall and the small branches die; and the danger is that eventually only the tops will live. On this account it must be planted quite open.

English Hedge Plants.—"B. C. C," Ohio. Hawthorn and Privet both grow in this country, but do not do as well here as at home. They grow ragged early. The seed is generally for sale at the large seed stores in cities, and sometimes at nurseries. The evergreens, Arbor Vitæ or Hemlock, make a better hedge.

Grafting, Budding, Striking Cuttings, etc.—"G. H. F. W.," Ill. You will find full instructions upon these topics in back numbers of the *Agriculturist*, also in Downing's, Thomas', and Barry's works on fruit culture, and in most works on gardening. See also page 209 of this number.

Seedlings of the ungrafted apple and pear are generally considered more hardy, but both are extensively planted to raise stocks for grafting and budding.

Dwarfing Apples.—"D. O. D," Mo. The Paradise stock can be had of nurserymen with the apples already budded upon them, or not. They are of no use except for this purpose, and it would be hardly worth while, except for curiosity, to graft the Paradise upon the crab apple.

Currants as Trees, are usually trained from cuttings. They need frequent pinching back, and constant care while growing to keep them in this shape.

Low Limbs on Fruit Trees.—The highest which the first limbs should come out will depend something upon the aim of the fruit grower. If the ground is used for any thing else, the limbs must be up out of the way of the cultivation. If fruit alone is the aim, we want very low limbs. The ground and the trunk of the tree is better shaded, the fruit less exposed to the winds, and more easily picked. There are many advantages in low limbs.

Fruits Abundant.—We do not recollect when strawberries have been so plenty and so cheap—10c. per quart. An abundant crop of cherries is ripening, while the peach, apple and pear trees are loaded with green fruit. Whatever may be said of other crops—and they generally promise well—we are at least having a fruit-ful season. Don't forget the bottles intended to prong the fruit period indefinitely.

Goats for Milk.—The milk is good, but small in quantity. Goats are generally kept by people who are careless of their neighbors convenience and comfort. They are destructive to all trees and shrubs, and should not be allowed in the streets in any civilized community. If a man has a bush pasture that he wants cleared up and buys goats he will not have to buy bush scythes. If he wants milk, buy it, or buy a cow.

Relieving a Horse Stung by Bees.—J. L. Gibbs thus describes, in the Stock Journal, his treatment of a horse badly stung by the enraged bees of a hive he had just upset. The horse was in an agony of madness, rolling upon the ground and screaming in a frightful manner. A rope was thrown over his head to secure him, and, after administering chloric-ether, he was covered with lime water and linseed oil—which afforded immediate relief. A purge the next day, when fever was apprehended, completed the cure.

Cure for Scours in Pigs.—E. B. Lewis, of Morris Co., N. J., says he cured this disease in August pigs with strong tea made by boiling red cedar twigs.

Sheep Labels.—A subscriber (name not given), in Essex Co., N. Y., asks information about sheep labels, described on page 173. The labels may be obtained of any tinner or coppersmith, or may be cut out of sheet copper, by shears or punches. We see no necessity for their being round, but they might be triangular, square or oval; the rings may be obtained at any good hardware and cutlery store, or, for aught we see, well-annealed wire would answer nearly as well.

Stock-Raising in Texas.—We know of no work devoted exclusively to stock in that State. The standard treatises, Youatt, Skinner, Randall, etc., would be available to any one who wishes to raise cattle there.

Grape Vine Flea-Beetle.—This is a glossy, steel-blue colored insect which makes its first appearance early in May, and eats into the fruit buds. A second brood appears in the latter part of July. Watch for and destroy them. Crushing is a sure method, but perhaps dusting the vines with lime when wet with dew, will be effectual. Showering with an alkaline solution made by dissolving one pound of hard soap in twelve gallons of soap-suds after washing, is also recommended.

Peach Borer.—"R. J. C.," of Va., recommends piling small stones around the stem of the tree.

Another Remedy against the Borer.—Like those weeds which thrive best when trampled most, the borers still live. Let us not despair of preserving our trees against this vexatious foe. The Editor of the Gardener's Monthly mentions that a friend, who is famous for his success in fruit-culture, especially in growing large crops of the finest apples, informed him that the secret of his "good luck" consisted in "keeping away the borer." To do this he says: "I merely keep the soil scraped from the trunk down to the bare roots, Winter and Summer." His argument in favor of his management, is, that the borer requires moist, soft bark for its operations, and that the removal of the soil from the trunk of the tree, rendering the bark firm and hard to the collar, instinctively causes the borer to select a more favorable place for development. The treatment thus described was successful: the trees were untouched by the borer.'

Rose Bugs on Grape Vines.—Whale oil soap, 4 lbs to a barrel of water, applied with a syringe, destroys most insects. We suggest it for the rose bug.

Curculio Remedy.—In the recipe which we copied, ¾ lb. was probably mistaken for ½ pk. The water should have all the lime it can take up, and for this purpose a pound is as good as a peck. The strength of the tobacco water we have never found necessary to measure very accurately, using a pound or two of cheap, damaged tobacco, to four gallons of water.

To Kill Bushes.—(Robert.) Doubtless the mid-summer is the best time. Not because of the passing overhead of any particular star or constellation; not because the moon, new or old, exerts then any occult influence; but because the bushes are then in their most rank and succulent state, and if cut off then, close to the ground, they get a hard shock, from which they do not easily recover. It is well, also, to scatter salt profusely over the stumps, so that some of it may fall into the hollow stalks, and so kill out the roots. The salt, moreover, will attract the cattle and sheep there, whose constant browsing will serve to check any subsequent growth. Grubbing up the roots by hand is the surest method.

Burying weeds, etc., with the Plow.—"J. C. K.," of Saratoga, recommends hitching a chain to the cutter, and the other end in the staple of the whiffletree of the off horse. The loop hanging down will lay all weeds and grass flat so that the plow will bury them. This is the common practice of all good farmers.

To Destroy Canada Thistles.—Mr. A. J. Wanzer of Fort Plain, sends us the statement that he tried the following recipe or direction with entire success: "Cut Canada thistles the second day after the full moon in July." He had an excellent crop on half an acre of land, and mowed them down on the day designated one year ago, and now they have entirely disappeared. We do not believe that the moon has any thing to do with it, but from this assurance that nothing else was done it appears that at a certain period of their growth (probably, if not interfered with earlier in the season) they are peculiarly vulnerable, and this period occurs sometime in July. Let who ever believes in the moon's influence try mowing a few every day for a week before and after the magical second day after the full moon.

Grass in Fish Ponds.—"T. M. P.," of Ind. If the grass or water weed springs from the soil, the evil may be remedied perhaps, by draining off the water occasionally, and cleaning out the mud. The mud would pay for cleaning out, aside from the benefit to the water.

Eggs Cheap—Lay up for Winter.—Fresh eggs are now very abundant and cheap in this city; they are selling here for 8 to 10 cents per dozen, and of course much lower in the country. They are a nourishing, cheap food, easily digested, and are good not only alone, but when used in a great number of cooked dishes, and especially in all kinds of cakes, etc. A large stock may be put up for winter now while they are plenty and cheap. Coat with wax, or lard, or anything to keep the air from entering through the shells, and store in a cool place. They may be kept in lime, as noted elsewhere.

Pie Plant Sauce.—A lady subscriber says it is not necessary to peel the stalks. This is true, we know of the Linnæus and other thin-skinned varieties. But all kinds have not so delicate an external membrane.

Filling for the sides of a Hot-House.—"L. M.," of Brownsville, N. Y., wishes to know the comparative merits of brick and tan. Brick makes the more lasting wall. Tan will attract moisture probably quite as much as the brick and will soon rot the boards that contain it. It would, however, last a few years, and if lumber is cheap it may be economical to use it for filling.

Best Shape for Drain Tiles.—E. Crosby, Gratiot Co., Mich. Round tile, simple cylindrical tile, are preferable, being less expensive, and more easily adjusted. Sole tile, that is, tubes with a flat piece on the lower side, are extensively used, but are not so desirable. The use of collars with round tile is very desirable, but considerably increases the cost.

Water Lime.—"N. H." of Absecom, N. J. This article is known in the market as cement, and costs about the same as common lime. It can be had at Newark, and probably at "the store" in your nearest town.

Preserving Posts—A Suggestion.—In most prairie regions lime, water-lime, sand and gravel are cheaply obtained. We think posts properly set in grout—made by taking equal parts of lime and water-lime mixed with the right proportion of sand for good strong, rather thin mortar, then filled with as much clean gravel as it will bear—would not only be preserved by the lime but would stand nearly as firm as though set in large boulders imbedded in the earth. Large post-auger holes two feet deep would be large enough, and yet would not need much material. The post should not touch the ground and the cement should be drawn up around it so as to turn water.

Coal oil to soften Putty.—"J. A. G." of Waverly, N. Y., recommends this article, and says it is effectual. If so, coal oil is now so common that it will prove a very convenient article for this purpose and save much labor in repairing old windows.

Coal oil for Oil Stones.—For this the same person also recommends it. It does not gum in warm weather nor freeze in cold, and sets a good edge.

Skunk Odor.—"L. P." of Coldwater. The bouquet is of unparalleled pungency and sticks closer than a burr. Burying the garments in the earth, or in fresh burned charcoal, are the best remedies we know of. They should lie several days.

Raising water by Pipes.—"T. J." of Michigan City, Ind. The cheapest mode of raising water and supplying a few families, would be by the water ram and lead or iron pipes. The pressure will be too great for cement. The size of the pipes needed will depend upon the quantity of water it is desired to raise, and the hight. See this subject illustrated in November 1858.

Cobble-stone Pavements.—"H. S. I" Woodbury, Conn.) They are made by filling in a bed of sharp sand to about half the thickness of the stones of the level you desire the pavement to be. The depth of this bed of sand is according to the soil—on a firm gravelly or sandy soil it need be but just thick enough to give a bed to the stones; on loamy loose soil considerably thicker, and perhaps underlaid with a layer of flat stones and gravel. When a suitable bed is prepared, stones of a uniform size (at least the exposed ends to be uniform) are selected, and then the stones are placed partially buried in the sand and rising one or two inches above the desired level. The work is done by means of an adz-shaped tool by which the sand is scooped away and the stone tapped down firmly. When some square yards are set, the stones are settled by means of a heavy pounder made of a sound hickory stick, 8 inches thick at the big end, 3 feet long with an upright handle in the top and one at the side; and finally, fine sand is swept back and forth over the pavement until all the cracks are filled.

Influence of the Moon on Vegetation.

Superstitions die hard. Men have a natural love of the marvellous. The simple truth don't satisfy. We like to be imposed upon, and not content with this, we impose upon ourselves. An instance of this appears in the various notions in vogue respecting the influence of the moon. Here are a few of them:—The rays of the full moon falling upon a pan of milk will turn it sour. The light of the moon produces a chill. Purgatives for children operate only in the first quarter of the moon. Pork will shrink badly, if killed in the wrong quarter. Peas planted in the first quarter will run to vines. Hemlock bark peels easily in the new, but not in the old of the moon, in August and September! We have read of a man who "*knew* that hickory cut in the new of the moon was safe forever from worms, for he had tried it"; "Safe *forever*, for he had tried it." Venerable old man! you have plucked the honors from Methuselah.

The moon, so the astronomers show us, is at a mean distance from our planet of 240,000 miles—sometimes a little farther off (apogee), and sometimes a little nearer (perigee). It revolves around the earth once in twenty-seven days, but, on account of the daily revolution of the earth on its own axis, the moon appears to go round us once in about twenty-five hours. It appears larger at one time than another, but this is only because the sun then shines upon more of that portion of the surface which we see. The same quantity of matter revolves around us at the first quarter of the moon as at the full moon, only we do not see it.

Does the moon, then, affect us by attraction? This acts on all matter alike, and it diminishes inversely as the square of the distance. The influence of the moon's attraction must be nearly uniform and constant, not dependent on the mere fact of its giving light or not. As it passes over us every day of the year, at nearly the same distance, why should not its attracting power be about equal every day? Yet people never think of the moon's power when it is not visible. Consider, too, its comparatively small bulk—only about one seventieth the quantity of matter of our globe—and its immense distance from us. Is it supposable that its attracting power can influence the rise and fall of the sap in vegetables, or the flow of blood in animals?

Still, it can not be denied that the moon produces mechanical effects on our globe. Its influence to a great extent causes the tides of the ocean. Yet it does not sensibly affect the surface of our lakes and rivers; and if it does not influence those great inland seas, is it likely that it affects the juices in the stalks of peas, or the sap in hemlocks?

But how about the influence of its light? It has no light of its own, but merely reflects that of the sun; so it is sun-light after all. How powerful is it? There is, according to M. Borguer, a French philosopher, only 1-300,000th part of the illuminating force in it that there is in the sun. Surely, only a little effect can be produced by that. Yet, as stated by Dr. Lindley, (see last edition of his "Theory of Horticulture,") a very slight effect has been detected by a French naturalist, on the delicate leaves of the *Mimosa citiata, M. pudica*, and the *Desmodium gyrans*, the first being raised four-tenths of an inch, the second about an inch, and the last exhibiting slight vibrations. These plants are very delicate and sensitive in their organization, and it would not be wholly impertinent to suggest that possibly these effects were produced, accidentally, by the artificial heat or lights of the green-house in which the experiments were performed, or by the bodily warmth of the operator, or by currents of air from open doors or windows. But, at most, the effect of the moon's ray is so slight on ordinary plants as to be entirely imperceptible, and of no practical account. An astronomical professor at our elbow observes that the reflection of light from a white cloud by day is stronger than that from the full moon.

As to the heat of the lunar ray, no great claim will be set up for it by any body. Indeed, our friend was about right when he affirmed that the moonlight chilled him. Experiments have been tried with the most delicate thermometers, and not the least impression was produced.

On the whole, we can not find that these moon-struck people have much beside moonshine in their theories. Those with whom we have happened to talk, seemed about as serious and wise as the farmer who gravely said: "And I allers took notice, in layin' stun-wall, particularly in the full o' the moon, that the foundation stun allers cum next to the ground!" *

For the American Agriculturist.

Spare the Birds!

A certain New-Hampshire poet is hard upon bird-shooters. He declares: "You have lived too long already. Instead of marble, you deserve a white birch slab, with this epitaph:

> Here lies at rest, a worthless pest,
> Who had no soul to lose or save;
> And these four words——*He killed the birds*,
> Proclaim his worth who fills this grave."

Well, I have myself said similar things in the days of my inexperience, but just now, smarting under many sufferings, beg to sing a different song. What thieves some of the birds have proved to be! Having won our affections they took great liberties with our property. Our strawberry beds, filled with the choicest new varieties, and just coming into bearing, were their first plunder. Whistling at them, and shoo! shoo-ing, did no permanent good. They thought it only one of our amusements. We then set up all sorts of scare-crows, old coats, hats and bonnets of former generations, rattling wind-mills, pieces of glittering tin, and such like terrific things. They answered well for a day or two; but after that the robins came and perched on the scare-crows, and revelled among the berries again! We next tried throwing sticks and stones, until we were all tired and our patience clean gone entirely.

Well, tenderness of heart and sentiment ruled, and the robins were allowed to take the better part of our strawberries. Next came the raspberries, and the robins likewise, and very hungry. We scolded, and threw sticks and stones, but to little purpose. The birds got most of the ripe fruit. We couldn't hurt the sweet songsters.

Last of all, came our grape-crop. Robins like good grapes. They coincide with the cities, that Delawares and Rebeccas are our best grapes, very toothsome, easily digested, may be eaten in large quantities without disagreeable results, etc., etc. An occasional stick or stone flying about their heads is a very trifling affair. Loud talking, and all attempts at frightening them, do not disturb their serenity. The writer of this, in a moment of passion, last Fall, loaded his gun and shot two robins from his vines, and hung their mangled bodies across the top of the trellis as an awful example to others. In ten minutes after, several robins came and sat by the side of their dead companions, digesting their grapes and pluming their feathers as though nothing special had happened! Day after day the voracious birds came in flocks, and soon stripped our vines. The money loss, indeed, was not irreparable, but the disappointment and vexation—the loss of specimen clusters from many new varieties which I had watched for several years, and were just coming into bearing; lost, too, in such a cool, unappreciative way—was more than I could patiently bear.

Henceforth, I shall keep my shooting-iron in order, and loaded; and the first robin that touches our strawberries, and the last that devours our grapes, shall feel the cold lead. In all other parts of our garden, orchard and lawn, all birds shall be welcome, but in the places afore-named we shall not be responsible for their lives. FOWLER.

[The argument of brute force is effectual, but should be used only as a last resort. We think birds that have the liberty of the lawn and orchard, will not be likely to fear the cold lead that awaits them in the strawberry patch. They will fear a cat, either caged or stuffed. You can not put pussy to a better service than to guard the berries. She may be confined by a string in the strawberry patch, or in a large bird-cage among the raspberries and blackberries. A skin neatly stuffed, in the cherry tree, will frighten them away. Their instinct teaches them to shun certain natural enemies. Keep these in sight and your fruit is safe. What boy would steal pears with a fierce bull dog under the tree? A bird's instinct is as good as a boy's.—ED.]

Use of Toads in Agriculture.

Our ugly friend affects gardens as much as the lord of creation. You will find him in a hole in the wall, in the strawberry patch, under the squash vines, or among the cucumbers. He is not handsome, but serene and dignified as a judge. He executes judgment upon all bugs, worms, snails, and pests of the garden, in the most summary way. See what a capacious maw he has, occupying the whole space from his fore legs to his haunches. He is the very incarnation of stomach, and his gastronomic feats would do credit to an Alderman. He tucks away bugs and all kindred flesh as an epicure would turtle and pudding. He is never full. That maw stretches like caoutchouc, and he is nearer having an endless gullet than any reptile. He is altogether too useful to be without enemies. All the serpent tribe hate him and devour him when they can. Even man slanders him. He misses a few strawberries from his patch, and lays it to the toad, who stands like a sentinel guarding his treasures. It was the snail who did the mischief before the toad took up his station; fortunately he is now where he will spoil no more ruddy fruit. Or it was the robin who slyly snapped up the berries and flew off into the neighboring tree, leaving the poor toad to bear his sins. But you see by the look of his honest face, that he is guiltless. Those lustrous eyes are above stealing. One fat bug would give him more pleasure than all the fruit in your garden.

Cultivate the friendship of toads, for they take the insects that the birds are apt to overlook. They inspect the ground closely, peer under the leaves of strawberries, under the growing vines, and nab every creeping thing in sight. They are as easily domesticated as birds, never sing when you do not want them to, are quiet and unobtrusive, and if not worth five hundred dollars a piece, are still profitable pets and fellow-helpers. Birch the boy that teases toads.

The Agriculturist Crop Reports.

Breadth, Condition, and Prospects of the Growing Crops in 24 States and Territories. Gathered from 1,557 Reporters.

On pages 218 and 219 will be found, in compact tabular form, the reports on the growing crops for June 10th. A considerable increase in the number of reports over last month will be marked, and some important changes. We are free to say that no system of gathering statistics in this country, (*even that attempted* recently by the Patent Agricultural Office,) has given so satisfactory and truthful an exhibit of the state of the crops, even over a very limited district, as we present in these reports for the whole country, where war is not actually going on. Drouths have continued in some sections since our reports came in, which were then severe, and in parts of Illinois the newspapers report, in a few cases, great damage to the wheat by the midge and chinch bug, but of this we have no direct report, and do not believe extensive damage has been sustained by the crops.

PROSPECTS.

Winter Wheat promised, on June 10th, well in all the great wheat region of the West, and below an average only in New-England and Kentucky. We have reports of injuries to the crops by rust, and insects, or by both, from a few counties in Ohio, Indiana, Illinois, and Iowa, but in few cases only are they very serious.

Spring Wheat has been affected quite unfavorably by the cold rains, frosts, and drouths.

Indian Corn.—Our great staple, upon which also depend the beef and pork product, is, we regret to say, a little "under the weather" yet, still June settles the fate of the crop, and that was only one-third passed when our reports were made out, and the season besides was nearly 10 days backward.

Rye, following in the wake of careless wheat farming, is chiefly reported upon in the older States, and hardly comes up to average promise.

Oats almost everywhere have been seriously affected by the unfavorable weather of all kinds —planted late, they have suffered equally from cold and drouth where they prevailed.

Hay.—The grass crop seems to have sustained itself well—no where below average in promise except in Michigan, New-England, and N. Y.

Potatoes promise decidedly better than common, except perhaps in the far West.

Fruit.—The apple crop has suffered considerably, but not enough to reduce the crop to average, or near it; and the peach crop still promises exceedingly well.

THE GENERAL AVERAGE is about 3 per cent lower than last month—the footing being **12.2.** The average prospects of farm crops (exclusive of fruit) is a little above average, viz.: **10.3** which is very gratifying.

CROPS NOT SPECIFIED.

BARLEY.—We have reports from Ohio, Wisconsin, Minnesota, the Middle and Eastern States. The mean of the estimates for surface compared with the average for 5 years is 13, or nearly ¼ more, while the prospects are accounted 11¼—decidedly better than average. Where sorghum is cultivated, barley has given way to it a little.

SORGHUM.—We have quite full reports from Ohio, Indiana, Illinois, Iowa, and a few from Pennsylvania, Minnesota, Mich. and Wisconsin. In only a single case is a decrease of surface reported—in another, an equal surface—in all taken together (70 reports), an increase amounting in the mean to nearly 3 times the breadth cultivated for the past 5 years. This must indicate a large increase over last year. In the case of this crop it would be better could we compare this year's crop with that of last year instead of the 5 years past. (If reporters follow this suggestion, will they please specify it particularly.) The prospects of the crops in Ohio and Indiana, are better than average; in Illinois, a little below, and in Iowa, just about average. The crop now promises to make itself felt in the market decidedly more than last year.

FLAX.—The reports from the flax-growing Counties of Ohio, Indiana, Illinois, and Pennsylvania, uniformly represent a much greater breadth sown than usual, and the crop above the average condition, and the same is true of scattered reports from other sections. They all foot up 2½ times as much sown, and two-tenths better prospects than usual.

HOPS.—So far as reported it appears the culture is increasing and the condition very promising at present.

PEAS AND BEANS.—These crops are reported chiefly from the extreme Northern line of States and Counties; about two-thirds more than common have been planted, and the crop does not promise well on the whole.

THE WEATHER for the month from May 10th to June 10th, has been exceedingly diverse in different parts of the country; even different parts of the same State exhibit in numerous cases the results of excessive rains, and, for the season, of unusual local drouths, while in every State larger or smaller sections have enjoyed that happy medium which is the farmer's highest joy in this respect. In New-England, and the States of Maryland, (Eastern) Virginia and Delaware, while there has been some drouth, sufficient to reduce the hay and Spring grain crop materially in sections of New-England, the weather has been on the whole, better than in average seasons. In New-York and Pennsylvania, it has been less favorable, a severe drouth being reported by many in the Northern, Western, and Middle counties of New-York, and in Western Pennsylvania, and at the same time very cool weather has prevailed in some of these same regions accompanied by killing frosts, while Central and particularly Eastern Pennsylvania, and Eastern New-York, to a less degree have suffered from powerful rains, causing freshets, etc. The season is backward every where, though where dry weather has prevailed, Spring work has been well done. In Ohio damage to crops from wet weather, floods and frosts is reported, though the dryness in some of the Northern counties has amounted almost to drouth. In Indiana, through the middle counties there has been some trouble from drouth; in the southern from wet; while a similar state of things has prevailed in Illinois. The streaks (so to speak) of wet and dry weather have taken in a measure an oblique N. E. course across the country. In Michigan there are reports of drouth and frost. In Wisconsin, cold, wet weather, drouth and frost are all reported. Iowa reporters speak of a backward season, cold and wet. The severest changes and hardest storms occurred between the 20th of May and the 1st of June, since which time the weather has been more generally dry, especially in New-England. In Maine, for instance, there has scarcely been a soaking rain since planting time, and the hay crop promises to be very light.

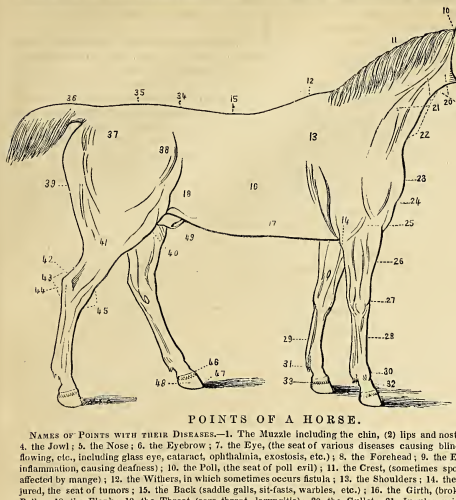
The Homestead Law.

The measure for procuring homesteads for the landless which has been before the country for so many years, has at length become a law. It will be good policy for the Government, we have no doubt, for the lands given away will be worth far more to the country, peopled with an industrious population, than lying waste as they now do. They will soon yield up their treasures of grain or of cotton and tobacco to be exported, and to buy goods that will pay a duty to the Government. Peopled, they will furnish soldiers for the army, and taxes to pay their expenses, should the country need them. Before this law was passed, lands were so cheap that every man of real energy and industry could obtain a homestead if he tried, provided he could raise the means to get on to the land. This will be the chief difficulty now. Hundreds and thousands of families to whom the land would be a priceless boon will never be able to reach it. They have little forecast, are poor and in debt, and pretty much discouraged. They can not find constant employment, and do not know how to employ themselves profitably. If associations could be formed for settling these lands in part by such families, it would meet the difficulty. It would help them, without damaging the success of the new settlement. It would secure to them at once homesteads and full employment, which they so much need.

Many questions are asked concerning this new law by those who desire to avail themselves of its advantages. A careful reading of the law, which we publish, will answer many of them. The lands are to be found in Michigan, Wisconsin, Iowa, Minnesota, Missouri, Kansas, Nebraska, Texas, and on the Pacific, in large extent, and some still in Ohio, Indiana, and Illinois, though they are probably not of a very inviting character. The lands lying along railroads are of double price, and on account of the proximity to market, are perhaps cheaper at that rate. Only eighty acres of these can be taken by one individual.

The old pre-emption laws are still in force, and a man may locate his land holding by these laws until the 1st of January, when he can hold by the new law. There are land offices in the vicinity of all these public lands, where the applicant can make known his wants and secure his homestead. It will be seen that the matter involves either the expense of a personal visit, or that of a delegate, which is a serious obstacle to the poor. The best thing that can be done, probably, in all cases by those who wish to avail themselves of this law, will be to form an association for the settlement of a township, say a hundred families or more, and send out an agent to examine and locate the lands in a body. The advantages of planting a whole christian community in the wilderness at once, over private emigration, are too apparent to need mention here.

A word of counsel: A farm for ten dollars is not particularly cheap. It is the raw material of a home. Houses, barns, fences, roads, bridges, churches, school houses, and other public buildings, are to be provided after the colony is located, and these things bring heavy taxes upon every individual for a dozen years or more. A man getting a living at the East should think twice before he goes into the wilderness. It is young men just married, or about to be, men with large families and scanty means of living, and professional men with small fields of labor, that can take this step with the best prospects.



POINTS OF A HORSE.

NAMES OF POINTS WITH THEIR DISEASES.—1. The Muzzle including the chin, (2) lips and nostrils; 3. the Jaw; 4. the Jowl; 5. the Nose; 6. the Eyebrow; 7. the Eye, (the seat of various diseases causing blindness, weakness, flowing, etc., including glass eye, cataract, ophthalmia, exostosis, etc.); 8. the Forehead; 9. the Ears, (affected by inflammation, causing deafness); 10. the Poll, (the seat of poll evil); 11. the Crest, (sometimes spongy and fat, and affected by mange); 12. the Withers, in which sometimes occurs fistula; 13. the Shoulders; 14. the Elbow, often injured, the seat of tumors; 15. the Back (saddle galls, sit-fasts, warbles, etc.); 16. the Girth, (broken rib); 17. the Belly; 18. the Flank; 19. the Throat (sore throat, laryngitis); 20. the Gullet; 21. Jugular vein; 22. Windpipe (bronchitis, injury from collar); 23. Point of Shoulder (contusions, lameness, and sprains); 24. Breast or bosom, (various internal diseases, chest founder, broken wind, etc., are located within the chest cavity); 25. the Elbow Joint; 26. the Fore Arm; 27. the Knees, (knee-galls, abscesses, broken knee—by white spots showing a tendency to stumble, knock-kneed, bow-kneed, weakness of the joint, etc.); 28. Cannon bone, (splents); 29. Tendons, often spongy, knotty, and the seat of wind galls and other injuries; 30. Fetlock Joint, (the seat of swellings, osseous enlargements, stiffness, wind-galls, etc.); 31. the Fetlock; 32. the Pastern (ring-bone, fracture, wind-galls, cracking of the skin, etc.); 33. Heels, (grease); 34. Loins; 35. Croup, (occasional dislocation); 36. Dock, (injury by the crooper, and mange); 37. Rump; 38. the Hip, (bruises, wounds, and fracture); 39. Quarters; 40. the Stifle, (subject to dislocation, bruises, sprains, and whirl-bone lameness); 41. Thigh or Gaskin, (sprain, string halt); 42. Hamstring; 43 and 45. the Hock. (blood spavin, bog spavin, bone spavin, capped hock, thorough-pin, curb, etc.); 44. the Hock-bone; 46. Corona; 47 Toe; 48. Walls of the hoof, (the Hoof. the seat of numerous diseases, must be explained on another occasion); 49. Sheath, (often foul).

The Horse of all Work.

It is a difficult thing to determine exactly what should be considered a perfect horse—for the perfection of any domestic animal consists in its adaptation to the service required of it—be it ox, cow, sheep, swine, or horse. The English hunter is as near the type of a perfect horse of all work as can be found. It is particularly necessary for farmers who breed horses to study their points, particularly with reference to sires. A breeding horse should be sound in all respects, except blemishes caused by accidents or violence, or by sickness which was neither inherited nor can be transmitted. A good horse is moderately short-backed (12 to 24), and long below (17); round barreled and well ribbed up (16); rather high in the withers (12); having moderately sloping shoulders (12 to 23); a broad chest (24), a firm, and muscular crest (11), a head well set on, lean and bony, with a clear, bright, medium-sized, intelligent eye, an open, thin, broad nostril, clean muzzle, and small ears; his rump (35) should be straight, broad, and full; his loins (34) broad; legs above the knee (27) or hock (43) long and muscular. All the important muscles of the extremities are located above these points, and below them they should be short and bony, and the tendons (29) hard, and free from soft spots or exerescenses; the leg bones large, flat, and smooth; the pasterns (23) not too long or oblique; hoofs hard, clean, deep, (not flat) round (on the ground) and good sized. The knees (27) and hocks (43) should be broad and bony, the quarters (39) large, broad, and muscular, square when seen from the rear, the shanks from the hock to the pastern short, hard, and clean. A horse can hardly have too deep and broad a chest, too strait a back from withers to croop, or too thin and delicate a neck near the head. Under the cut above we give the names of the various parts, and some of the blemishes and diseases of the parts. Many diseases are only known in fancy, and almost all are known by several different names.

Shall we Spare the Crows and Blackbirds?

It is well to look at two sides of a question. We have argued even in favor of crows and blackbirds, and let our correspondent present the other side. Let the enemies of these examine the maws of their victims and report the contents, whither they be young birds, or corn, or beetles. We do not believe that blackbirds eat the young of other birds, but crows do.

To the Editor of the American Agriculturist.

Looking over the *Agriculturist* Calendar for May, I noticed the following: "Birds—Spare them all; put up bird boxes, kill cats that kill birds, allow no guns to be fired on or near the premises." Innocent birds should be protected, and a heavy fine should be paid by any one cruel enough to injure them. No one loves the sweet song of the Lark, the Goldfinch, or any other innocent or beautiful bird more than I do, but such birds as the vile crow and the more hateful blackbird I shall ever be at war with. The crow will rob the blackbird or any innocent bird it can find or catch, and the blackbird will do the same as far as it is able, and for this reason I shoot all the blackbirds and crows that I can hit with my rifle. I never shot a crow for pulling corn, but have shot dozens of them because they rob and kill innocent birds. So too with the blackbirds, I often have watched them fleeing from two or three little birds that they had robbed. It is idle to talk of saving the birds by ceasing to destroy crows and blackbirds. They are the very worst enemies that birds have. I am tired and out of patience with the almost eternal cry of "Save the crows," because, as the New-York farmers club says, they are terrible fellows to kill worms and save the corn. It is true that they will eat a few worms when they come handy and can get nothing else, but they greatly prefer larger game, and when they can find frogs, young chickens, or young birds of any kind, they never trouble themselves about the duty of picking worms out of corn hills; one robin is worth a dozen crows to kill worms, and yet the crow-savers never seem to dream that the crow and blackbird will soon exterminate these useful, innocent birds, as well as many others. As to firing guns, I would say that I shot more than any other man in the neighborhood, and I have frequently heard persons remark that we have more singing birds than any of our neighbors. The report of a gun evidently does not frighten small birds away, else none would be with us. D. W. F.

Seasonable Cultivation.

There is such a thing as thorough culture, and seasonable culture: it is of the latter we now have a word to say. Seasonable culture cuts down and roots up weeds when they are quite small. It does not wait until they have become so large as to require double the amount of time and strength to subdue them. Least of all does it wait until they have ripened their seeds and begun to scatter them on the wind. Seasonable culture tills plants at the time they will be most benefitted by it. Here, for example, is a hill of melons: the vines a foot long, and the weeds among them a foot high. Now, how long would those vines have become by this time, if the weeds had never been allowed to grow? It will not make amends to cut them down now: they should never have been suffered to grow at all. Work vigorously as you may, the rest of the Summer, you can not catch up. Here, then, is a difference between culture and seasonable culture. Consider this, too. The work of digging out such large weeds injures the melons. The roots will be more or less broken and disturbed, and the leaves, suddenly exposed to the full glare of the sun, will wither. When the plants recover from this shock, and go on again to set their fruit, it will be considerably later in maturing, than it would have been under better management; and of course it will be poorer than if ripened in its own proper season. Does not this instance illustrate a general principle? The rule holds good of nearly all crops. They should be planted in their proper season, and cultivated at the time they most need it. Let farmers learn, if they would thrive, to till no more ground than they can till well and seasonably.

The Manure Heap in Summer.

There is danger lest, in this busy season, the manure heap be overlooked. With the tokens of fertility waving in every field, we are apt to forget that the wants of another year must be provided for. The barn-yard probably has been cleared of its winter store, and but little dung is now accumulating. Yet, that little should be carefully husbanded. As manure heats and wastes by decomposition in hot weather faster than in cold, provision should be made for saving it by the use of absorbents. At every leisure hour, the farmer's team would be well employed in gathering up sods, scrapings of the road-side, leaves, rotten logs and stumps, and whatever else will decay, and carting the same into one corner of the barn-yard. Indeed, it should be a standing order for every member of the household to save and gather up everything that may answer a good purpose in the compost heap. How a heap will grow, when every one contributes something to it! With a pile of absorbents near at hand, they will be used. The liquid parts of the manure will be taken up, and the solid parts prevented from fire-fanging. Let these various articles be worked over, half and half, and the whole bulk will be worth as much as the same amount of simple manure. By Autumn, there will be a fine provision for enriching the grain-fields and for top-dressing grass lands.

A few Words for Muck and Peat.

Some persons who seem to question the usefulness of these articles, would hardly continue to doubt, if they considered well of what they are composed. They consist largely of half decayed vegetable matters which grew long ago on the spot, or were washed in from the adjoining high lands. Being covered up, layer upon layer, their decomposition has been quite slow. They also contain certain mineral elements which have leached in from the surrounding soils. But, aside from these fertilizing elements, peat and muck when dry possess great attraction for ammonia. Absorbing this from liquids and half solids, they store it up for the food of plants to which it may hereafter be applied.

Now, when we walk over a farm on which the high lands are light and nearly exhausted of their fertility, and yet find in the low lands deposits of peat and mud and muck, is it not a plain case that this farm is in a measure upside down, and ought to be set on its feet again? Some of its fertility, no doubt, has been carried off in the crops raised and sold, but much still remains behind, though down in the bogs and swamps. It has been traveling down hill perhaps for centuries, yet with so slow and silent a step that the farmer has not noticed it. The laws of nature have carried down the fertile elements, but theory will not bring them up again. Man must do that. Here is a field for his ingenuity and industry. His lands are not wasted beyond recovery, if he will only bestir himself and follow the hints which nature gives him.

Doubtless, it would not be best to apply this peat and muck in the crude, "sour" state in which it is first dug from the bed. Let it have the ameliorating influences of heat and air, and perhaps of frost. Spread it in large, long heaps on the uplands. Mix it with lime or fresh ashes and let the heap lie several months. Or again, dry it, and afterwards cart it under a lean-to of the barn, where it may be used to absorb the liquids of the stables. Then spread it on the hungry fields, and they will clap their hands for joy, and the hills will be joyful together.

Spontaneous Vegetation.

To the facts mentioned by our correspondent SCHOLASTICUS, on page 178, a multitude might be added from almost every farmer's observation. Clear up a piece of woodland, and a new class of trees comes in—very rarely the last that occupied the soil. Burn it over, and very likely raspberries, whortleberries, and mulleins will start up, though these plants have never before been seen within miles of the place. Throw up mud and peat from almost any swamp, and let it lie a year or two, it will be covered with vegetation unlike that in the immediate vicinity. How do we account for these facts?

Men of skeptical minds jump to the conclusion, that they do not grow from seeds, because they did not see them planted, and from the known circumstances they could not have been planted in their day. They think the soil must have the power of spontaneous generation, and of course infer that the world made itself, and all living things began their existence spontaneously. There is no need therefore of a Creator.

We have no evidence in these, and kindred facts, that every plant does not spring from seed. It is a well known fact that the surface of the earth, far below the ordinary depth disturbed by man, has been subjected to very great changes. Surface soil filled with seeds of all kinds of grasses, herbs, shrubs, and trees, has been commingled with the soil away down in the depths of the earth to the solid rocks, often many thousands of feet below the surface. The agencies which have done this are still in force. Earthquakes, volcanoes, floods, land-slides, etc., are the more obvious causes, because violent in their operations, but the trickling rills on the mountain sides, and the constant flow of many waters toward the sea, taken in connection with the never ceasing action of the tides, effect much more. The Mississippi River and its tributaries are displacing many acres of soil, loaded with seeds, every day. Seeds produced in the Rocky Mountains, by this agency, find their way to the Gulf, and are spread all over the Delta. Some lodge on the surface of the overflowed land, and germinate with the subsiding waters. Others are buried at different depths, clear to the bottom of the Gulf, and may be thrown up by the diggers of wells, and Artesian borings, hundreds of years hence, to astonish the natives with strange vegetation, and the "creative" powers of the soil. No casing has ever been invented so good as the soil to preserve seeds. No man can tell how long seeds will keep well in it.

What is going on, on a grand scale in the great valley, is going on along the banks of every rivulet and brook. The running water is all the while transporting seeds, and depositing them in new localities. Every depression that gathers mud for a swamp, gathers seeds in great variety, and has been gathering them for centuries. A great many die, but enough live to cover any patch of mud or peat with a new vegetation.

Besides these agencies for distributing seeds, we have birds and animals. The seeds of many of the berries have a covering so hard, that they resist, successfully, the gastric juice of the stomach. The berry eaten to-day upon the mountain, is ejected many miles away to-morrow in the valley. Some plants, like the burdock, have little hooks attached to the seed, and are ready to fasten to every moving thing for conveyance to a new location. Many have wings attached to them, so that they are blown for miles by high winds. Nature is prolific with seeds, every plant producing abundantly after its kind, and almost as lavish in providing the means of distributing them far and wide.

It would be very strange if every newly exposed patch of soil did not produce new kinds of plants. Salt springs and lakes were once the bed of the ocean, no matter how far they may now be from the shore. We should expect to find plants belonging to the sea-shore, near salt springs. The bottoms of lakes, and ponds, are strewn with seeds that have been accumulating for ages. Give them light and heat, and they germinate. Seeds of white clover lie dormant for years, until gypsum, sown upon the land, or some other cause induces germination, and "brings in clover." The seeds of sea-side plants, transported by birds, or dormant in the soil, wait only the salt-water influences afforded by salt springs to start up and flourish.

Irrigation.

BY JOHN R. WOLFE, COLORADO TERRITORY.

The subject of irrigation has been discussed but little by our agricultural societies and papers; and yet it is to my mind one of the most important, not only to countries like this, where there can be no dependence upon seasonable rains, but to every country where the seasons vary from wet to dry, sometimes causing a surplus, at others, putting us on short allowance. "Give me neither poverty nor riches," but a regular and uniform supply, should be the prayer of every farmer. Fluctuation in produce must ever cause fluctuation in price—excess is not to be dreaded as deficiency; and if by any means we can prevent with certainty, any serious deficiency, we have gained the ultimatum of human effort in supplying human needs. It is well known to your readers that there are many places where the only supply of water is by artificial means. In those places crops are regular and certain. If then the same plan can be made available to any considerable extent in other countries, in dry seasons, we have gained an important point in securing a fair supply. It will be my business now, to endeavor to awaken attention to the subject by setting forth the modes of irrigation in different countries, to point out the most improved plan, and to exhibit in a favorable light, the advantages of this method of farming, even where rain is abundant.

If we go back to the early history of Egypt, we find that the flooding process was employed, as much perhaps for the fertilizing effect, as the moisture. In the early days of Mexico, the same method was adopted. This method is still practiced in New-Mexico, and has been adopted in this territory to a large extent under the administration of Mexicans employed for that purpose. But as yet, little irrigation is done here. Our farmers have contented themselves with the selection of damp spots of ground, for the main crop, and experiments on high lands without water. Nearly every such experiment has failed; and they must continue to fail until the seasons change, though there may be spots where small grain can be raised on high ground by deep plowing. I presume Egypt has not changed, but the more intelligent agriculturists of Mexico [and the rest of the world, too,] have abandoned the flooding plan; and it remains for Americans to bring methods of irrigation to the highest degree of perfection. Imperfect as is the practice in New-Mexico, the

most prodigious results are produced: onions are raised there weighing 2½ to 3 lbs.; these are from Mexican seed; the American annual onion sometimes reaches 2 pounds weight.

When the flooding process is used, all the ground is surrounded with embankments to retain the water, say 12 inches high. In these embankments there are openings for ingress and egress; the water is let on, and allowed to remain until the ground is thoroughly soaked; it is then drawn off. The result of this is the deposit of sediment, baking of ground around the roots and tender plants, and an immense amount of labor to put the ground in order again. When this plan is applied to field culture, you may calculate, if you can, the labor necessary to raise a large crop. By the time the ground is in order it is time to let on the water again, and so on through the season. This method was formerly adopted in Utah, but I am told is gradually going out of use, and much of their small grain is raised without irrigation.

The writer saw at once that this plan would not suit on an extensive scale, and that it was not the best method on any scale. He therefore adopted a plan which is destined to supersede, in this territory, the plan of New-Mexico. Grounds requiring irrigation must be so arranged that the water will flow slowly through furrows prepared for the purpose, so as to give ample time for it to penetrate the entire soil. Head and tail ditches are constructed, at convenient distances, to admit the water, and conduct the surplus to other points where needed. Corn and potatoes are easily irrigated by a central furrow made with a shovel-plow; small grains by furrows run 2 to 4 feet apart with a similar instrument. All small crops—roots, etc.—planted 18 inches apart, admit a small furrow with a hoe. Thus the water can be applied to the roots without touching the top of the plant, or causing the ground to bake. The demand for water can always be known by digging with a hoe or spade about the plants. As there is a time for all things, so there is a time for the application of water. The best rule is to keep the ground regularly moistened until the plant approaches maturity, when the supply should be diminished or cut off entirely until it is fully ripened.

It is always best to have a pool at the head of the main ditch to collect and warm the water; the same result may be obtained by a long ditch and slow motion to the water; but this is not an absolute necessity when the water is applied to the roots alone, nor is it a necessity to irrigate in the evening or night only; on the contrary, the process may be continued all day, without any apparent disadvantage. In order to avoid the evil of second growth in potatoes, or the formation of small ones on the main tuber—I select those varieties free from any such *constitutional tendency*, (the blue Meshannock is objectionable on this account.) Round potatoes are generally best. Then I would make the rows, (drills or hills), 4 feet apart, plant deep, and hill but little; then by running a center furrow, the water will be absorbed in larger quantities, the roots kept moist longer, and the growth necessarily more regular. I am thus particular about the potato, because this crop is so easily spoiled by an excess of water, becoming insipid and almost useless. Size with loss of quality is gained at a great sacrifice, and notwithstanding the immense yield and enormous size of our potatoes, but few raised in this country are fit for table use; they are generally too knotty and watery. These defects are produced by planting in low, moist, rich land, where the supply of water is too great and continued too long—until the frost kills the tops while the plants are in full vigor. It is an absolute necessity in the production of good potatoes, that the supply of water be withheld in time to stop the growth and allow the tuber to ripen before the tops are entirely killed by frost.

I have kept no accurate account of the extra expense of irrigation; but when I consider that the soil is made to yield its utmost capacity with uniformity, and that the hands irrigating can always do extra work enough to pay expenses, I am decidedly in favor of systematic irrigation, and never shall own a farm without facilities for irrigating a considerable part thereof. To the advantages already enumerated, may be added this, that the soil is continually enriched by the mineral, animal and vegetable matter contained in the water; while the extra crop produced always enables the true farmer to return to the soil greater quantities of fertilizing manures.

Reservoirs and ditches once well made, last for ages; the water may, in many cases, be used for threshing, grinding, churning, etc., etc., and afterwards applied to the land, and in many places the reservoirs may be made both ornamental and useful, by raising fish in them, and that too with little or no additional expense.

There are here few farms without the means of irrigating at least a part. All our low lands are capable of being arranged for and supplied with water. Suppose every man who owns a living spring, rivulet, creek, or has land on the river bottom, to be in a state of readiness to use the water judiciously, what would be the result? 1st, scarcity would be an impossibility. In a season when rains seldom fall, crops must be short; and a farmer can make more on ten acres well tilled than his whole farm would pay in ordinary seasons, besides the security of *seed time* and *harvest, bread* and *meat*. 2d, The moral effect on himself, family, and the world at large will more than compensate for the extra expense. 3d, The expense of culture is less, proportionately. 4th, Less land will produce the ordinary amount; the balance can rest. 5th, Smaller farms, better culture, and greater certainty, will open the way for supporting a denser population, both of producers and consumers.

Let any man who doubts these statements take one, two, or three acres, make the experiment, and report the result for the benefit of his fellows. Too little attention is given to this subject; frequently whole districts are in a condition of starvation, as was the case in Kansas, solely because they are not prepared to use the means nature furnishes bountifully. From my personal knowledge of the Kansas River and its tributaries, I do not hesitate to affirm that in the valleys of those streams four times the amount necessary to support the entire population of the State could have been produced. And yet Kansas begged for seed and bread. Except on rivers the water is easily diverted from its accustomed channel, and directed where needed. In many places a few feet of spading, a small dam, and the plow does the balance as fast as a team can walk. The water itself furnishes power to lift water for irrigation—wind mills may be made to do the work, and rather than the population should starve or beg, horses and cattle could be used to advantage where the water required lifting only a few feet. But usually the fall in the stream furnishes all the conditions necessary. With the great amount of fertile soil in our valleys, how easy it would be to secure ourselves against want and dependence.

The fact is, by concentrating labor on the valleys in time of drouth, pinching scarcity need never be felt. This subject appeals not alone to the selfish propensities of humanity, but will be appreciated by the true philanthropist—one who comprehends the moral effect of plenty, both on the buyer and the seller, and the absolute necessity of a regular supply of food and raiment to human progress.

Raising Turnips.

It is altogether too late in the day to question the utility of the turnip crop. The raising of those varieties wanted for table use, is no unimportant matter. We could almost as soon think of Thanksgiving dinner without the turkey, as without the savory dish of early white Dutch turnips. Carefully stored in the root cellar, or put down in boxes of sand in the common house cellar, they will keep fresh and juicy all winter. For spring use, commend us to the purple-topped Swede, or rutabaga. We do not recommend any of these as being particularly easy of digestion; but, eaten in moderation, they serve as a good relish and accompaniment to other food. For stock feeding this root is of great value. For producing milk, for fattening, or for keeping up the general health of cattle, swine and sheep, through the cold season, their importance is not easily over-estimated. It is a great economy to use them especially in seasons where there is a scarcity of other fodder. A leading English agriculturist once said that the failure of the turnip crop there would be a greater blow to the nation's prosperity than the failure of the Bank of England. Nothing like this would be true for our own country, perhaps; yet it is a fact that the turnip crop is one of great importance.

The first of this month is in time for sowing the Rutabagas and Swedes, but a longer season is desirable if wanted for stock feeding. With other varieties we may follow the old adage,

"Twenty-fifth of July, sow turnips, wet or dry."

But this, like other adages, must be taken with qualification. Sow the seed in July whenever the ground is moist enough to give the seeds a quick start. The land should be rich, clear of weeds, light and warm: a black muck, rather sandy, is best. If a piece of newly cleared land can be found, turn it over and sow on that: the crop will be quite sure. The seed germinates quickly, and insects are less troublesome than on old land. Next best is a sward ground. The soil having been worked fine, sow in drills half an inch deep, fifteen inches to two feet apart, and at the rate of one and a half pounds to the acre. Abercrombie says: "half an ounce to every hundred square feet." The seeds will germinate in from thirty six to forty eight hours.

As soon as the plants are up, look out for weeds and insects. Work the drills with cultivator or wheel-hoe, and the rapid growth will reward all the labor. When the plants have made rough leaves an inch broad, hoe them and thin out to six or eight inches apart. Continue the thinnings afterwards, until the roots finally stand eight or ten inches apart. If a little plaster is sown broadcast over the plants when well established, it will give them increased vigor.

To destroy that great pest, the fly, some use soot, ashes, or air-slacked lime, strewing it on the leaves when wet; but warm, moist weather will soon carry the plants beyond the reach of flies. Still, if the insects persist, and the young plants are eaten up, dig up the ground and sow again.

An Illinois farmer, speaking of the expense of living at the West says: "It will vary with the size of the family, and *their propensity to gratify pride,—an expensive article in a new country.*

To Improve Sandy Soils.

The defect in such soils is chiefly of this sort: They are mechanically defective, being so light and porous that they can not retain moisture, or manure, if applied. Besides, they are generally wanting in various important elements of plant growth. Therefore, to improve them, we must endeavor to supply these radical defects. The first point can be gained by spreading a coat of clay over the surface and dragging it in. This will improve its texture, and will also impart fertility. Adhesiveness and strength having been gained, manure from the barn-yard may be applied as fast as it can be procured. Another method is to dress such lands with rough composts. Prepare the heaps at leisure, in the barn-yard. The ingredients may be such as these: ten loads of stable dung mixed with five loads of clayey soil, twenty bushels of ashes, and the same amount of lime. After these articles have been well incorporated, let the mass lie for a month or two; then it will be ready for use. Such a compost, it is easy to see, will be more enduring, and better in all respects, than the same bulk of barn-yard manure. It will improve the quality of the land permanently, and will enrich it with a fertility which will be very lasting. On every farm of the kind here supposed, there should be one or more compost heaps of some sort *constantly* building.

A Ring for the Bull's Nose.

A young bull is sometimes very handsome, and a very pleasant thing to pet and fondle. Sometimes children cosset and handle him in the pasture and yard for a year or two, when suddenly, the animal turns upon them, first in play, and then in fury, and they hardly escape with their lives. Not a year now passes, in which we do not hear of some farmer who, being in the field among his cattle, is set upon by his fine bull, tossed in the air, gored to death, or in some way wounded more or less severely, and perhaps maimed for life.

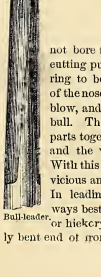
The only safe way to handle these creatures, is to put a stout ring in the nose of each. When this is once done, it is for life. The operation is not so cruel as some imagine, certainly no more so than the barbaric practice of boring our children's ears, for hanging rings in them. (Why

Full-ring.

not bore their noses, as well?) Get a cutting punch a little larger than the ring to be inserted, and the cartilage of the nose can be perforated at a single blow, and that with little pain to the bull. Then put in the ring, screw the parts together, (as shown in the cut,) and the wound will soon heal over. With this simple contrivance, the most vicious animal can be safely managed. In leading a fractious bull, it is always best to have a stout, six-foot, ash or hickory staff upon which is a spirally bent end of iron, called a "twist hook," or to which, by a few links of a chain, a "snap-hook" is firmly attached. A bull will never tear his ring out while being held or led by hand. Tied to a post, or behind a cart, sometimes by a sudden start he will tear out the ring before he realizes what he is about. In such a case, if seized at once by the nose, he may be held. But no animal should ever be fastened in this way. A rope around the horns is the proper fastening, and if by any means this gets loose or breaks, then the ring will generally hold. The ring affords an easy means of getting hold of a fractious bull in a pen, box stall, or stable, by means of a "bull-leader" as described and shown in the cut. What farmer or patriot will not say: Anything, oh! anything, to prevent a Bull-run, whether on the farm or the battle field!

Leading-clasp.

The "leading-clasps" are of various forms, in general, however, like the one shown in the cut annexed, and differing in the manner in which they open and shut, and are held shut. The ball-tipped ends separated, are placed within the nostrils, and are then closed together, space being left for the cartilage of the nose between them. They can not be unclasped by any action of the bull, nor torn out without subjecting him to as great pain as if a ring were torn out. These clasps are very convenient for leading any neat animal which is not perfectly docile. When there is any doubt who is master, a ring or leading-clasp affords to the mind of the animal a very ready solution of the question. For bulls, however, the permanent nose-jewel above described is decidedly preferable.



Bull-leader.

Notes on the May Agriculturist.

BY A WESTERN FARMER.

Central Park Conservatory, p. 133.—One of the best things possible—and the Parsons are the very men to manage such an enterprise honorably and successfully. With a few other attachments, such as an arboretum, a herbarium, an aquarium, and a zoological garden, as we hope some day to see, the New-York Central Park will become the most attractive spot in North America.

Six Good Pears, p. 133.—I can name six *better* ones: to wit.: Bloodgood, or Osband's Summer, of which you may take your choice, or have both, for early; Bartlett, White, and Gray Doyenne, or Virgalieu—if you can grow them without cracking; Brown Beurre, Seckel, Winter Nellis, Glout Morceau. These will all grow on the quince for dwarfs, as well as the "six good ones," if double worked—if folks will insist on having dwarfs—and they flourish finely on standards. Why our nurserymen will continue to laud up such coarse and flavorless things as the Duchesse, and Vicar, I can't imagine, only that they are showy, and succeed better on the quince than almost any thing else. As table fruit they are worthless, and for cooking, decidedly inferior to a score of others. [But the fruit *sells*, sometimes at a dollar a pear.—Ed.]

An Agricultural Bureau—Who shall be at the Head of it, p. 136.—Nobody—unless he can be better than any thing who has yet figured in that department. Genl. Banks may be a good man for aught I know, provided he'll throw aside his politics—when he gets there. Such an office needs a common-sense man, whose tastes and proclivities are decidedly agricultural, and has gumption enough to discriminate between the pretensions of quacks, and honest, well-tried experience. The *trade* of administering such a Department of the Government, has yet to be learned by whoever may be the incumbent, and the office should not be one of rotation, or removable without cause.

Dead Animals for Manure, p. 140.—True, every word of it; and if men would only believe such things, thousands of dead carcasses which every year pollute the air with their putridity would be turned into the most fertilizing materials.

Tim Bunker on the Horn-Ail, p. 140.—"Tim" is a great man in his line, and utters a deal of homely truth in his neighborhood observations. But, somehow or other, Tim's grammar and style have wonderfully improved of late. I think he must have been taking evening lessons in spelling and punctuation of his district schoolmaster.

The best Team on the Farm, p. 140.—You can't make a northern farmer drive a mule team, unless he goes off South and couples "niggers" with his mules, and then he becomes a worse "driver" of both than him "to the manor born." Off South, the mule is decidedly the best and most profitable team. I have seen scores of arguments, *pro* and *con*, as to the best and most profitable teams for northern farmers to use, and the advocate of each was right or wrong—according to circumstances. On *good* lands, and free soils, horses are best. On poor lands, and over rough soils, oxen are preferred. Horses are indispensable for marketing purposes, where a man's time is worth any thing. In my own practice I have always used both, finding each preferable for certain kinds of labor. Every man must judge for himself, by his own experience, which of either, or both, he is to prefer. The whole article is capital.

A few Hints about Plowing, p. 141.—A good article. But after all, the farmer must *know* his soil, to understand the best manner of plowing it. Heavy clays require a different mode of plowing from friable loams, or gravels; and the natural, or acquired fertility of the soil has much to do with it also. I know lands where you may bury the plow to the beam, and all the better for it, while in others six inches is abundance. One may theorize until he is gray, and never draw a right conclusion. Experience, *with* theory, is the sure way to test all things.

Sorghum Syrup for North, p. 143.—I doubt whether this can be made a paying crop north of 41°. The cane requires a long summer and a hot sun to develop its saccharine to the utmost. We have millions of acres of the best sorghum lands at about 41°, and one or two degrees south of it; and while they are *sure* for its growth, it is hardly worth while to run much risk for a *chance* crop north of it. Better work our lands with something that is *certain* in production, and exchange that, or the avails of it, for the uncertain ones that we need.

Timothy Mowing-Lands, p. 143.—Partly true, and partly not. Timothy is *not* "a poor pasture grass," and "every body" *don't* "know it." I assert it to be among the *very best* of pasture grasses, and if anybody don't believe it, let him turn his stock into a field of mixed grasses, and wherever the timothy predominates, see how eagerly they will crop it in preference to the others. Timothy can be fed too close, I acknowledge, and it should *never* be fed in the Spring of the year. Nor should *heavy* stock ever be turned upon it when the ground is soft, as late in the Fall or Winter, for their heavy tread will *poteh* and destroy it. I have had timothy, with other grasses, in pasture for more than twenty years, where it holds its own with them, and has been pastured with every thing that eats grass on the farm. *My* rule is always to sow a good share of timothy on both pasture and mowing lands when I lay them down with red clover. The blue grass and white clover will come in of themselves where the land is natural to them; and so will red-top, on moist grounds—one of the best of our grasses for either pasture, or hay.

The Apple Orchard, p. 145.—A good article, and to appearance, by a practiced hand. As to varieties for cultivation, no positive rules, irrespective of soil,

climate, and locality of the orchardist, will apply. The demand of the market, and the varieties most favorable to the soil and climate, must measurably govern. A good apple in one place may be worthless in another, and no man's *ipse dixit* of a "best selection" is worth a copper for *all* localities. I need not go into particulars to prove the truth of this; but if any one doubts it, let him try, and an experience of a dozen years will show him that he has fooled away a good share of both his time and money. I am this Spring grafting over many well grown trees with sure and productive kinds, in place of the *fancy* things that I was thoughtless enough to put in because some partial ignoramus made me believe they would do well with me, because they were favorite kinds three hundred miles away. The table of "best apples for different localities" is useful, and no doubt reliable, as founded on the experience of those who "voted" them. [These remarks may as well be applied to pears.]

Crinoline Flower Pots! p. 149.—Well, what next? I thought the "wimmen" had all the *crinoline* to themselves; and if the flower pots are coming in for a share of the article, where will it end?

"*Hulled Corn.*"—Yes; it used to be good in my boyhood, when potatoes-and-milk, bean-porridge, johnnycake and brown bread were every-day edibles on the table. But since wheat flour and rice have got to be plenty and cheap, our housekeepers have found out that it is "too much trouble" to make the "hulled corn." Yet, it is good, I admit—if you can get the "ley" taste all out of it. But, as things go, I never expect to eat a dish of hulled corn again; and I don't know that I shall cry about it, either. I don't believe even "Aunt Mary" cares much about sweltering over a pot, with her ash-barrel and ley kettle lumbering up her washroom, for the sake of getting up a dish which the majority of her "young folks" will be inclined to turn up their noses at when they find out that "poor folks" lived on it fifty or a hundred years ago.

Buckwheat—Its Place in our Agriculture.

Buckwheat fills a place in our list of crops that no other plant can. It has the name of the lazy man's crop, from the little preparation the land needs for its cultivation, and the ease with which it may be grown. This is perhaps the chief objection to the crop; it favors slack husbandry, and yields a remunerative crop so long that some lands have been entirely run out by cropping with it. You can skin land more effectually with buckwheat than with any other crop. On this account, and some others, the crop is not a favorite one with many of our best farmers. It is said to poison the land for corn, and the cases are pretty numerous where corn following buckwheat has failed. The succession is certainly not to be recommended. The seed also remains in the land for a year or two after it is sown, and makes its appearance among subsequent crops more than any other grain. To the farmer who loves clean seed, this is a serious objection. It can be remedied by following it with a hoed crop, or by stocking down to grass.

Buckwheat may be sown where other crops have failed, or could not be planted on account of the wetness of the land, or lateness in its preparation. It is usually sown from the middle of June to the middle of July, the latter month generally being preferred, where the object is to get grain. If sown too early, there is danger that the grain will not fill out well in the hot weather of August. If too late it is liable to be cut off by the early frosts.

The yield is generous, even on soils where other grains would not pay. But we doubt the policy of growing this or any other grain without manure. There is no crop, not even turnips, to which Peruvian guano is so well adapted, and on which it shows such marked results. We have seen a heavy crop grown on exhausted land with only a bag to the acre. From ten to fifteen bushels to the acre is a common yield on rather poor, though not exhausted, land. With the guano the yield is frequently doubled. Where this is the case it makes a very handsome profit on the manure. But it is only in special emergencies and where there is a deficiency of farmyard manure, that guano is to be recommended. The like benefit will not accrue from its use the second year upon the same land.

It is an excellent cleansing crop, where land has become foul with charlock, wild worm-wood, Canada thistles, and other weeds. It grows so rapidly that it gets the start of all other plants, and keeps it. It completely shades the ground. It is for this reason that it is so often sown upon swales, and brush pasture recently cleared, where there are many coarse clods. The roots and sods are kept moist by the shade, and decomposition goes on rapidly. It is well adapted to newly cleared lands full of vegetable matter.

Buckwheat stands high among the plants to be turned in for manure. It matures so rapidly that two crops can be turned under in a season, or a crop of clover, and a crop of buckwheat following. It does admirably well to precede a crop of rye. It may be sown any time before the first of this month, turned in the last of August, and the rye sown soon after. It is claimed by those who have tried the experiment for several years, that a crop of rye may be taken from the land every year by this process, and the soil all the while improve.

Two to four pecks are ample seed for an acre, the less quantity being used on rich land. For feeding, it is nearly equal to Indian corn. John Johnston, who is authority in fattening cattle, prefers a feed of one half buckwheat, to one wholly of corn, at the same price. It is used extensively for fattening poultry and swine, both whole, and ground with other grains. A very common provender in New-England is oats, corn and buckwheat mixed in equal parts and ground. This is mixed with potatoes for swine, and with hay for working horses.

Tobacco Cultivation—No. V.

The tobacco fields have, by the first of July, escaped the dangers of infancy, and though many a plant has become a "cast away," or fallen in the field of conflict with worms, sun, and storms, the thinned ranks have been filled, and raw recruits are making up for lost time. Hot-days with occasional showers, cause tobacco to "grow like a weed." There is little danger of dry weather injuring the crop, if the ground has been well prepared, and the surface is kept stirred so long as it is possible without tearing the leaves. After this, the thick leaves so shade the ground that it is kept moist.

The hawk-moths or sphinges begin to fly in July, or perhaps earlier, but at this time are first particularly noticeable. The *Sphinx Carolina*, (the hornblower moth,) is the parent of the tobacco worm. It is a very large moth which flies at dusk, seeking its food, which is honey, in various flowers open at night—potato blossoms, wild evening primrose (*Œnothera*), foxgloves, and other garden flowers, but particularly in the large funnel-shaped blossoms of the stramonium or Jamestown-weed, (*Datura stramonium*). This moth is as large and has somewhat the flight of a small bird, hovering about here and there—quick in its motions, not very shy, and resting before the flowers into which it thrusts its long thread-like proboscis, which in its flight is curled up like a watch spring. The moth is of an ash-gray color; fore-wings with blackish, wavy lines; hind-wings, whitish in the middle, with four black bands, the two central ones narrow and jagged; fringes spotted with white; five orange-colored spots on each side the abdomen; the proboscis exceedingly long. The spread of the wings is often 5 inches. The more there are killed of these moths the fewer will be the worms in the field. The eggs are deposited near the edge of the leaf on the underside, and hatch in about a week. The apple-green larvæ feed very quietly on the under surface for some time, but finally become quite active and ravenous.

Poisoning the Hornblowers.—The moth may be easily killed by watching near some of the flowers mentioned and striking them down. If the common fly poison of the shops, called "*cobalt*," (but really *black arsenic*, though the majority of druggists and other dealers do not know it,) be very finely pulverized, and two ounces be put into a half pint phial, and filled up with equal parts honey and water, after standing a few hours it makes a seductive and fatal beverage to the hornblowers. The best way to administer it is, by means of a little syringe, to drop half a dozen drops in each available flower of the stramonium situated near the fields, and in case these are not abundant, in the blossoms of the other flowers mentioned. It is a good plan also to pick some stramonium flowers and phlox them, filled with the poisoned nectar, in the tobacco field at the time the moths are laying their eggs. In fact we think for bee-keepers the poisoning should be effected by putting the bait altogether in plucked flowers, which would wither before the bees fly much. Of course since the moths fly only in the dusk of the evening, the poisoning must be done at that time. There are several cases reported of this poisoning being very successful, and we have therefore given the method in detail.

A flock of young turkeys will make way with an immense number of worms, and without doing any special damage to the leaves, particularly if they visit the field in the early morning when most of the worms are under the lower leaves. It is not a very agreeable duty of the field hands to find and crush between the fingers as many of these worms as possible; but to this end the field must often be thoroughly searched through, investigation being made at every hoeing, and oftener, if necessary. When the plants grow too large to be hoed, and the large leaves form in the perfection of which the great value of the crop consists, vigilance must increase. Instead of crushing the worms, when they are abundant we advise *bagging* them, (each man having a pocket or bag at his side). It is less disgusting, and a supply of chicken-meat is thus obtained.

It is in August that the greatest labor and care is necessary to prevent injury from the worms, and it is seldom necessary to "top" the plants before the middle of the same month. In some very forward fields, however, the plants will be ready for topping by August 1st. This is done by breaking off the tops about 2 or 2½ feet high, according to the vigor of the plant. The object of this is to throw into the leaves that force which would otherwise be expended in producing seed. Branches will start from the axils of the leaves, and must be watched and removed continually. The plant should be topped before these "suckers" start, and higher or lower, according to the season, and the time left for maturing the leaves. This will form the subject of our next article on tobacco culture.

The Articles on Winter Wheat.

The committee to whom was referred some 15 essays or articles on the culture of Winter wheat, return two articles, and recommend a division of the premium. One is the soundest and best, but very brief; the other more in detail, but rather old fogyish, and both describe the practice rather of Eastern, than of Western or prairie farmers. The general principles of wheat culture depend upon the nature of the grain, and are invariable. The details of culture vary with the soil and the climate, the danger from insects, the demands of the market, the expense of labor, etc. We are disappointed in not having received, in response to the liberal premiums offered, essays involving more thought and labor, and it may pertinently be asked: "If neither of the articles are worthy of the prize, how can you justify a division of it?" We do not like to go behind the decision of a committee, and besides, there are very many valuable and practical hints and directions in the articles, taken together.

The necessity or great desirableness of underdraining is not sufficiently brought out. The numerous and explicit articles previously published in the *Agriculturist* on this subject, find in this crop important application. The recommendation to provide surface drains, in the second article, was accompanied by a long account of the surface drainage of wheat fields, which we have thought it best to omit. Thorough underdraining with tiles, four feet deep and 33½ rods apart, is doubtless the best preliminary preparation a wheat field can have, unless it be drained by nature, and gravel beds, to such an extent as to render further drainage unneeded. Stone-drains, brush-drains, wood-drains, are each advisable under certain circumstances; and in the stoneless soils of the West, mole-draining by simply passing a "mole" or "mole plow" through the ground at a depth of 20 to 30 inches, is found of great service, affording a means of draining the prairies at a cost of 8 to 10 cents per rod, in a manner which will last for several years.

There can be no doubt that culling heads for one's own seed is exceedingly advantageous. This is done by letting the best part of the field stand to get very nearly or quite ripe, and then going into it and plucking the largest and longest heads, separating the shrunken grain after it is thrashed or rubbed out. It will pay, and where wheat is drilled may very easily be done. This process should be followed up for several years in order to secure the best results—planting culled seed grown from culled seed. The wheat is an improvable plant, perhaps the most so of all our cereals. In this way, new varieties may be originated, with plumper grain, giving a larger yield to the acre, and more flour to the bushel. This process pays well in England, in the higher price such improved wheat brings for seed—frequently three times the price of miller's wheat.

In regard to drilling, our farmers shrink from it on account of the cost of the drill. Necessity or supposed necessity influences a feeling of preference; and so indiscriminate broadcast sowing finds advocates. There is no doubt in the minds of most who can afford to use one, that the grain drill very soon pays for itself. The principles upon which it operates apply to all soils, and the results of its use are very uniformly advantageous.

The use of the reaping machine is gaining advocates very rapidly, as machines come to be more conveniently managed. It is true that tasty cradlers will lay down an acre of wheat in a very short time, with less waste from shelling if the grain be too ripe—and on small farms, or in small fields, with less expense; but when the fields are extensive, the grain in a proper state and the reaper a good one, the comparison of the relative convenience and expense will be in favor of the machine. The same is true in regard to thrashing;—either muskilled hands, a poor machine, or a small quantity of grain to be thrashed, will be a reason why thrashing by the flail would be preferred. Grain caps were commented upon in the June *Agriculturist;* we believe in them, and though not so much needed for grain as for hay, they will turn rain perfectly, and may save the entire crop from sprouting.

The great want, perhaps, in wheat-growing, especially in the older States, is the conviction that the thing can be made to pay. As soon as our farmers can see this, they will learn how to do it. This conviction is growing, we have no doubt, in many of the districts where wheat had been abandoned for a time. It is no wonder that the crop failed so generally in New-England, for it certainly requires more skill, if not more manure, than most other crops. It went out more from lack of manure, than from the multitude of its enemies, though we would by no means underrate the latter. A farmer sowed without manure upon poor land, and got a poor crop, as he deserved to. The trouble was in the man, not in the plant. A few farmers who were willing to do justice to the plant, have never ceased to get a paying crop. Gov. Colby, of New-Hampshire, boasts that neither he nor his fathers ever bought a barrel of flour.

[PRIZE ARTICLE.]

Cultivation of Winter Wheat.

BY J. HOLMES, CHITTENDEN CO., VT.

Wheat, one of the greatest staples of the country, if rightly managed may be made one of the most profitable of our cereals, upon almost any soil. Twenty years' experience has demonstrated to me that we hardly need fail of success, if the following mode of proceeding be strictly followed.

SELECTION OF SEED.

Select none but the best seed of bearded wheat. The White chaff is preferable, it being worth some ten cents more per bushel in Eastern markets. Prepare a strong brine—do not depend upon old beef or pork brine, and wash as long as any filth or immature grain rises to the surface. By this process we shall expel from two to three quarts of foul seed and shrunken grain per bushel, from what would be called an "extra" article. Seed prepared in this manner will send up none but the most hardy and vigorous plants, consequently will be less liable to winter-kill; and as like produces like, we may look for an article in the increase equal if not superior to that which was sown. Add three quarts of dry, fresh-slacked lime to every bushel of wheat; mix up thoroughly two days, or two weeks, previous to sowing. *This is important—neglect the lime* and nine times out of ten you will have more or less smut, which will depreciate the value of the wheat.

PREPARATION OF GROUND, SEEDING, ETC.

The ground, if rich and strong enough, may be sown after peas, otherwise, after summer fallow. In either case, manure on the surface, and plow or drag in with the wheat. I prefer to use about fifteen loads to the acre thus prepared; then, after sowing thinly, to plow it in. The seed, by coming in immediate contact with the manure, receives a thrifty and vigorous start, which it otherwise would not attain. This I think is highly important to insure success. I have never used the drill, but in its stead Ide's cultivator which answers a good purpose. If you harrow in the seed, in no case roll afterwards, as the inequalities of the surface will prevent the snow from blowing off, and the plants will be less liable to be affected by frost. But if covered with a drill or cultivator this precaution is unnecessary, the seed being so much deeper, and the roots less exposed. When the ground is settled in Spring, go over with a heavy roller; it covers many exposed roots and often adds five to seven bushels per acre.

Have the ground well pulverised previous to sowing; it is useless to sow on lumpy and badly prepared soil. In case there is no manure to be had, cover the surface immediately after sowing and before the wheat starts, with a light layer of straw; the wheat in a short time will come through, and prevent it from blowing off. The straw will act as a mulch, and the ground being shaded will retain the moisture; and if the soil is not very poor you may expect a good paying crop. Two and-a-half bushels salt per acre tends to prevent rust, makes the straw strong and bright, and gives the young wheat a dark color. If any one doubts the truth of this statement, I hope he will make the experiment, and my word for it, he will at once adopt the practice. I know of no better mode to prevent the ravages of the midge than early sowing, and even this sometimes fails. The last week in August, or the first in September, I would prefer, but this depends upon circumstances; if the weather is dry and hot, I would rather wait until October. Some years since I made an experiment to test early and late sowing. One piece was sowed the last week in August; one the last week in September, and one the middle of October, on the same kind of soil and treated in every respect alike. There was no difference in the time of ripening or in the quality of the grain, but the earliest sowed produced the longest heads, consequently yielded more per acre.

I do not sow plaster on wheat, as it tends to rust, and increases the bulk of straw but not of grain.

HARVESTING.

Cut wheat as soon as the straw presents a golden appearance below the head to the first joint. The grain will be somewhat soft, but there need be no fear of shrinkage; it will produce more and better flour per bushel than if let stand until it becomes thoroughly dry. Bind in small sheaves; put them in a stook capped with two sheaves securely bound on. Put up in this manner wheat will stand through a long spell of wet weather without any fear of growing. If possible thrash with a machine as it is drawn to the barn; it will save once handling and it may then at once be scoured from all kinds of vermin and will be free from filth, which will enhance its value. Of course if the above directions are followed, your wheat will be of such a superior quality that it will be marketed at your own door for seed, which will save the expense of transportation, and will command fifty cents more per bushel than an ordinary article, and in proof of the above theory I will give you the result of two fields treated as I have prescribed. From one acre and four rods, forty three and one half bushels, sold for seed at two dollars per bushel. On the other field I sowed fourteen and one half bushels, and harvested three hundred and fifteen bushels.

[PRIZE ARTICLE.]

Cultivation of Winter Wheat.

BY JOHN S. GESNER, CANADA WEST.

The writer's experience in the cultivation of winter wheat extends over sixteen years upon loamy clay, and four years upon sandy land. I shall give it just as I would *talk* it.

DRAINAGE.

It is absolutely necessary to ensure a good crop that the land be thoroughly drained—underdraining, if done properly, is without doubt the best; but open or surface draining is the most common, and is that upon which my experience has been formed. I think that a field can not be too well drained, not only after it is sown, but previously—and that extra labor in clearing out and keeping clear every ditch, and digging large outlets, is amply rewarded by the extra yield.

SOIL.

A loamy clay I consider the best for wheat. I would prefer four or five inches of loam, with clay subsoil. This I always summer fallow—plow in May, deep as I can, putting on two teams if one will not turn it deep enough, harrow well, cross plow in June, in July cultivate with a two horse *cultivator* or *scrabbler*. The latter part of August manure well, and immediately plow again in 11-foot ridges, cutting narrow, deep furrows.

If the soil be light and sandy I would summer-fallow only in case of a new or weedy piece of land, which I intended to seed down. My way is to turn under a good crop of clover about the middle of June. The clover may be fed off until nearly the first of June, at which time sow about 2 bushels of gypsum (plaster) per acre. This will give the clover a good growth, and will be of service to the coming wheat. Plow in the clover deeply; a piece of chain about 3 feet long fastened to the coulter of

the plow so as to drag in the furrow, will be found of service in helping to turn under the clover. Manure well, and use the two-horse cultivator thoroughly about the last of August, and you have a good seed-bed.

VARIETIES.

My favorite kind of wheat is a bearded variety, known as the "Kentucky White," or "Hutchinson's." I know that bald varieties, such as "Blue Stem," "Soule's" and "White Flint" will, if not damaged by insects or rust, yield the most per acre, but owing to the midge (see *Insects*), I much prefer bearded varieties. Take the earliest, best and cleanest wheat you can get for seed. Depend upon it, dirty seed will bring a dirty crop—I don't believe that wheat will turn to chess.

If any thing should prevent early sowing, I would then sow "Mediterranean," because it will mature here quicker than any other variety, which is quite an item in late sowing. Treatment of seed is the same upon either clayey or sandy soils.

TIME OF SOWING.

The last week in August and first week in September I have found the best time for sowing. In this section sowing later is useless, unless you sow "Mediterranean." Should the weather be very growing, and the wheat getting too much top to stand the deep snows, turn on your stock and feed it off. There is no danger in pasturing wheat moderately, if your land is well drained. In fact, I think it does it good by enriching the soil. The plants should not be nipped close to the ground—but moderately pastured, so as to reduce the tops of the plants to enable them to winter safely.

MODE OF SOWING.

I sow "broadcast," and use a half bushel measure to sow out of. Take a strap, pass it through one of the handles of the measure, (or a hole made for the purpose), and unite the two ends so that when it goes over the neck the measure will be convenient to dip the right hand into. You can thus always know exactly how much seed you are using per acre. On a ridge 11 feet wide, I go and return upon the same ridge. Place the seed in bags in the most convenient places upon the field. A little practice will enable any person to sow quickly and evenly.

QUALITY OF SEED, ETC.

I have found 1½ bushels per acre enough, when sown early; if sown late (Mediterranean) I would sow two bushels per acre. I have tried brining the seed, liming it, and various highly recommended decoctions, but never realized any benefit from their use. Sow good clean seed, and it need only to be well covered with good earth. Dibbling and drilling in the seed does very well when only a small quantity is sown, and you wish to obtain as much from the amount of seed sown as possible; but when much ground is sown I decidedly prefer broadcast sowing, notwithstanding a larger amount of seed is used. Drilling in wheat, and then hoeing it afterwards, does exceedingly well in theory, but does not succeed so well in practice; every thing must be done nearly right to enable you to hoe without hoeing up your wheat. In fact, when the wheat crop is the main crop of the farm, and much has to depend upon *hired* labor, the simpler and the stronger the working implements are, the better. We raise wheat *to pay*, and if we do not raise as much per acre, if the *profit* is more, the better for us.

HARROWING AND ROLLING.

After sowing, harrow thoroughly—you can not harrow too much,—and put on a good heavy roller. The land is then ready for furrowing for surface draining. I have found it a good plan to roll wheat also in the Spring, as soon as the frost is out of the ground—particularly upon land that the frost has hoven much. It presses many roots into the ground, which would otherwise be killed by the sun. I have also found it a good plan upon a piece of wheat which has suffered much from the action of Jack Frost, but has clumps of wheat still left, to run over it twice in the Spring with a light harrow, and then roll with a heavy roller. It divides the remaining roots, and although *hard looking* at first, the growing crop will soon astonish you with a change for the better. I do not believe in sowing "plaster" in the Spring upon wheat. Plaster should be used, if at all, upon the crop which precedes the wheat. If I thought my land was not rich enough in the Spring, I would top-dress with either stable manure or guano; but I prefer to have the land rich enough before the wheat is sown.

HARVESTING.

I always let wheat intended for seed get *dead ripe*; the rest I hold commence cutting before the grain is quite hard. If too green, it makes dirty and heavy work; but when you have a good deal to cut, you had better cut some of it a little green, than lose by its getting too ripe. Bearded varieties always shell very much when dead ripe. If care is used, however, in handling, not so much is lost by shelling as one would at first suppose. When wheat ripens from the *head downwards* you can cut very green without danger of shrinking. I do not, like some wheat-growers, say that wheat is better and plumper cut green, for it is my belief that every crop should come to maturity before harvesting.

Never bind too large. Have the sheaves of moderate and uniform size. Rake thoroughly, as it is very easy to leave enough to pay for cutting and binding upon the ground. In *setting up* or *shocking* I always set 10 or 12 sheaves together in a row, 5 or 6 on each side; I never cap my shocks. If carefully set up, they will stand; and in case of rain, will dry quicker without caps. We often have what is here called *catching* weather—and often grain is damaged. It is therefore the safest to house or stack as soon as the grain is fit.

THRASHING, CLEANING AND MARKETING.

Now that horse power thrashing machines are so easily obtained, the old-fashioned way of thrashing with the "flail," or with horses upon a large floor, is mostly done away with, and the new-fashioned machines are a great advantage to the farmer. I think, however, that wheat for seed is better if thrashed with the flail, and would always prefer it to that thrashed with a cylinder at great speed, which I believe injures many of the grains; perhaps not enough to prevent their growing, but enough to prevent the plant from being as hardy as though the grain were perfectly sound. It is a farmer's duty to clean not only his wheat for seed and bread, but every bushel he sells, thoroughly. On account of the carelessness of too many farmers in this respect, our market for wheat is injured very much. In marketing, as a general rule for at least this section of the country, it is better to sell in the Fall; you save all that would be lost during the Winter by mice, rats, etc., and have the use of the proceeds sooner. Much, however, depends upon circumstances, and a man must use his judgment in the matter; for it often happens that wheat is low in the Fall, with every prospect of being much higher in the Spring. In such case hold on to the grain; but if a good price is offered in the Fall, sell it.

INJURIOUS INSECTS, RUST, ETC.

Under this head I shall be very brief, for learned men have written much upon the subject, which every farmer ought to read. To those who have not, I would say, by all means read the works of Dr. Fitch, of New-York, upon the insects injurious to vegetation. The wheat fly or "midge" does a great deal of damage to late-sown wheat, and is much worse upon bald, than upon bearded varieties. For this reason I always sow bearded varieties. In my opinion the only remedy for the midge is—*to drain well—manure well*, sow early, and sow an early kind of hardy, bearded wheat. In every case where I have done this, I have escaped the ravages of the "midge,"—while my neighbors who have done otherwise have suffered very much. I examined this season a field sown very late with "Mediterranean," the seed of which was mixed with "old redchaff" (bald). Every head of the bald was completely destroyed by the midge, while the bearded was but little injured; and I firmly believe that in sowing late, mixing in a portion of bald wheat seed will preserve the bearded variety from the "midge." If the wolf (or grain weevil) attacks the wheat, (which it seldom does here, to any extent,) I would thrash out as soon as possible. If any insects survive the thrashing cylinder, I would spread out the grain to the sun, when they will all vanish.

The wire worm is the curse of wheat-growing here. As yet I think no certain remedy for this pest has been found. The best remedy I have tried is frequent plowing and harrowing, both in Spring and Fall, disturbing them as much as possible, never allowing a field to remain too long in sod. Old pastures or meadows are complete nurseries for wire worms. But above all things, cultivate an intimacy with birds. Not only wire worms and "midge," but all kinds of insects injurious to the farmer, are destroyed in countless numbers by the birds; and until we encourage in every practicable way the presence of birds, we may expect to suffer.

I believe rust, like mildew, is caused by exhalations which arise from the ground, with damp fogs, and stimulate the growth of the plant to such an extent as to cause the rust to appear; and I further believe that thorough draining, good cultivation, with the use of hardy varieties, early sown, are the best preventives. Where lands are rich in ammonia, the straw will be ranker and much later. I should in such cases sow about two bushels of salt per acre just before any danger of rust.

In conclusion I would say that I consider 35 bushels per acre a fair crop. If every thing is right, more per acre will grow; and I have no doubt that the day is not far distant when, wheat-growing having become more of a science, 50 and 60 bushels per acre will be called an average crop. There is one thing I am convinced of, and that is, that in spite of all known injurious insects, wheat can, under proper management, be grown to pay the farmer, and pay well, too. I think the onslaught of the insect tribe upon the wheat will result in good, by bringing about a much better system of farming, which otherwise would never have been attained.

Farming in Iowa.

Raising Wheat and Corn—Shelter for Stock, etc.

To the Editor of the American Agriculturist:

Our best wheat is raised on prairie sod, turned over the previous Summer. The first season of my farming in this section, I sowed 20 acres of Spring wheat on prairie sod, which had been turned over in June of the previous year, and corn dropped in every third furrow. It was harrowed well, at the time of sowing, without cross plowing. I never had a finer piece of wheat. The next Spring I cut the corn stalks from 12 acres, raked them up and burned them. On part of this I sowed wheat without plowing, and part was plowed before sowing. I had much the best wheat on the unplowed portion. We do not use any manure, the soil being sufficiently rich without it, but the time will probably come when manure will be valuable.

Most of our corn is planted on freshly turned prairie sod, dropping from two to four kernels in the crevice between every third furrow, and stamping it in with the heel. We sometimes raise as much as 50 bushels per acre in this way, and the ground is in good condition for Spring wheat.

Much of the stock in this country is still wintered without shelter of any kind. I had a stable for my horses, the first winter of my coming here, but nothing for any other stock. The winter was very severe and I resolved to have a shelter before another winter. Going to the timber, I cut and split strong oak stakes for posts, 8 feet long. These were set in a ditch 2 feet deep, 6 inches apart, and a plank spiked to each stake on top, the earth being filled in firmly about the bottom. Ten feet south of these I set another row of posts, 10 feet apart, and fastened cross timbers on the top of each one, running to the plank on the stakes. Rails were laid on these timbers, and when we thrashed our wheat in Autumn, the straw was used for a roof, topping off with prairie hay. Rude as this is, it forms a good shade in Summer and a shelter in Winter. I have seen unprotected cattle snowed in so that only their heads were visible.

Mahaska Co., Iowa. W. GILMOUR.

THE WATERING PLACE—FROM A PAINTING BY ROSA BONHEUR.
(Engraved for the American Agriculturist.)

Running water is always fashionable with the cows and all grazing animals. See old brindle slaking her thirst, and the calf about to plunge in after her, though he is innocent of all other beverages than his mother's milk, and reckless of the feeble persuasive behind him. The quadruped has manifestly two feet too many for the young biped tugging at the halter. The clear stream is more frequently visited and more enjoyed by the herd, than the most popular watering place by the lords of creation. It is much more essential to their health and thrift.

A very large portion of our Northern States is clearly indicated by nature as a grazing region. We have clear running streams, often fed by cool springs running through green pastures, and the herdsman has hardly to lift his hand to get an income from his fields. He may turn in his cattle in Spring, and take them out in Autumn or before, with a large addition to their weight ready for the butcher. But where fields are near the farm-house, it doubtless pays better to keep a dairy, and to look for the income in the shape of milk, butter, cheese and veal. In this case it is still more important that the water should be clear and pure. Water affects the taste of milk much sooner than the flesh of animals. As a rule, where there are swift running streams nothing more is to be desired for a watering place. There can be no stagnant water, and all impurities are immediately carried off. But it frequently happens in small pastures and upon level land, that there is no brook, while in adjoining fields there are springs upon elevated ground. In such cases it is not a very expensive job to bring in water with a lead pipe, or bored logs, delivering it in a wooden trough. This is much better than to dig a hole in the ground, and puddle the bottom with clay. In such drinking holes the water becomes stagnant, and is made foul with the droppings of cattle. If the trough is raised a little above the ground, they can only get their noses into it, and the flow of water, though small, is as sweet and pure as the largest stream. The next best artificial contrivance is the hydraulic ram, by which we may raise water to any desired hight, and supply reservoirs, of large or small capacity. But to work the ram we must have a running stream of considerable size. This is more frequently used to furnish yards and houses than pastures. If the choice is between a well and one of these puddled holes, by all means dig a well.

The Family Cow.

It is of the pet Alderney or Devon, kept by the villager, that we speak. The prime object is to get milk enough for the family, with a large dash of cream for the berries, and to be frozen in that cheap Summer luxury—ice cream. She is the sole occupant of the stable, daily carded and brushed by Patrick, the admired of the master, and half idolized by the group of children who watch the milking process at morning and evening with longing eyes, and learn that milk does not come from pumps. The owner was not brought up on the farm, does not know good milk, and wants the most of it that can be got out of a single animal at a fair price.

There is not much difficulty in getting a fair supply of milk, say twenty quarts or more daily from a single cow in the month of June, when the pasture is in its glory The quality may be improved somewhat by extra feed, even when the grass is most flush. The difficulty lies in meeting the wants of the family when the feed begins to fall in the latter part of Summer.

A good cow is indispensable—one that will give not less than fifteen quarts of milk daily in flush feed, and soon after calving. Careful attention, embracing gentle treatment, regular feeding and milking, carding, etc., is another requisite. But with all these things she must have extra feed when the grass diminishes. Succulent food, corn stalks, millet, mown grass fresh from the meadow, are all very desirable if they can be had. If we must fall back upon meal, there is nothing perhaps quite equal to cotton-seed meal to start the milk, at the same price. The cow will probably not like it at first, but if it be mixed with Indian meal, or if it be scattered upon the fresh-cut grass she will soon learn to eat it. Many milkmen use one or two quarts a day, with great advantage. The manure made from it is very valuable, and is said by some to be worth the first cost of the meal.

Linseed oil cake is another excellent feed for milch cows used for this purpose and for fattening, much more extensively in England than with us. This also adds greatly to the value of the manure heap. If these are not accessible, use Indian meal, which is within reach of all. All these varieties of meal will add as much or more to the quality, as to the quantity of the milk. If it be an object to make butter for the family, it will pay to use meal very freely. If, however, we wish to preserve the cow for breeding and raising her calves, she should not be made too fat. There is little danger, if she have full supplies of succulent food with the meal.

Staking up Trees.

We need not argue the importance of properly tying up young trees, especially such as are exposed to winds, or to be jostled by passing men or cattle. It is undesirable to bind a tree directly to a stake, because it rubs and chafes against it as it is swayed by the wind. A tight band is not good, because as the tree grows the trunk enlarges, and the band is drawn too tight. The plan shown in fig. 1, overcomes these difficulties entirely, and affords, besides, very good protection against animals. Two stakes are driven near the tree, and a band of canvass, oil-cloth, or leather is passed from each about the stem. The winds may sway it back and forth a little in every direction, unless the bands are too tight, and the trunk may grow a great deal, while the only effect produced will be that the stakes will be drawn a little nearer together. Fig. 2 illustrates another plan not so good for tall stemmed trees, but better for short ones perhaps—although equally applicable to any. A band of straw is passed about the trunk, the ends twisted together for a foot or so, and then bound about a stake set 12 to 14 inches off. The stake must be set in the direction toward the prevalent high winds, and the stiff straw twist prevents much motion, even toward the stake. "As the *twig* is bent, so the tree's inclined," is an old saw, but one which never needs re-setting, however much the trees may. The worst eye-sore a thrifty farmer can have on his farm is a lopped down tree.

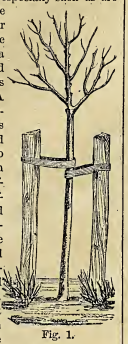


Fig. 1.

Fig. 2.

When and How to Bud.

Budding, we need hardly say, is the process of removing a bud from one variety of tree or plant, and inserting it in another. The object in budding is the same as in grafting, viz: to propagate a desirable sort of tree. The cion used in grafting is only a development of the bud used in budding. Fruit can generally be got by grafting sooner than by budding. But when a variety is very scarce, we can by budding get new limbs from single eyes; whereas, in grafting we have to use several eyes. The stone fruits exude so much gum in the Spring in northern climates, that it is hard to make grafts take. In all kinds of fruit, where grafting has failed or been neglected in the Spring, budding may be resorted to in the Summer.

The ordinary season for this work is from the first of July to the middle of August. But a more accurate criterion is the state of the buds and the bark. The shoot from which the buds are taken, must be of the current year's growth, and must be mature. This maturity will be shown by the forming of buds at the axils of the leaves, and of the terminal bud. The best buds for working will be found along the middle of the shoot. Many circumstances affect the condition of the buds and bark, and those sorts which come earliest into condition for budding must be first attended to, and of course others in succession. On some stocks and in some soils plums mature first, in others pears. Cherries may often be budded on Mahaleb stocks as late as Oct. 1st. The bark must be in a condition to lift easily from the wood, and there must be sap enough between the two to feed the young bud, and to help form a union with it. There must, also, be a certain degree of affinity between the bud and the stock. The pear, quince, apple, crab, and mountain ash, belonging to the same family, may be budded or grafted on each other. So with the apricot, plum, nectarine and peach. Currants and gooseberries may be worked on each other, and one sort of cherry on another. The practical operation of budding is simple. The method most commonly followed in this country is called *Shield Budding*, and is as follows: Having cut a cion containing the desired buds, (fig. 1,) choose a smooth, young stem, for the operation; and, if possible, let the insertion be made on the north side of it. With a sharp, thin-bladed knife, cut a slit through the bark about an inch to an inch and a half long, and with a cross-cut at the top, the whole shaped like the letter T, (fig. 3.) Then, from your cion, slice out a good bud with a little of the bark and wood attached, as in fig. 2. Now, with the other end of your budding knife, (if you use the common one), raise the bark of the stock, and slip the bud into the slit, and press it down to the bottom of the cut, leaving it so as to look like fig. 4. Be careful not to bruise the bud or the adjoining lips of the bark. Finish the work by tying down the bud and bark with bass-matting or soft woolen-yarn. Let the whole wound be well covered, so as to exclude air and moisture except from the point of the bud (fig. 5.) This whole operation should be done quickly. If the bud is long exposed, it dries, and is less likely to grow. A round minute is full long enough for the operation. A smart budder will insert and tie 600 to 1000 buds in a day, and if he has boys to tie after him, 2000 to 3000. It must be done expertly, too. If the bud has any torn and ragged edges, or if the wood under the slit is bruised with the knife, expect a failure. Where one has but a few buds to insert, he should choose a cloudy day, or the moist hours of morning and evening.

Fig. 1.

Fig. 2.

Fig. 3.

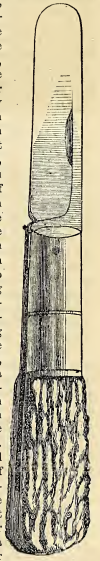
Fig. 4.

Fig. 5.

After-Treatment.—In a fortnight after the insertion, examine the buds to see whether they have "taken." This will be shown by their plumpness and freshness. The bandages should then be loosened a little, to allow room for expansion of stock and bud. Early the following Spring, cut off the stock with a sloping cut two or three inches above the bud. The bud will then push with much vigor.

The Best Budding Knife.

The common budding knife, having a long flat ivory handle for lifting the bark after the cut is made in the stock, is very inconvenient in rapid work, as it requires turning end for end at every operation. The knife, of which we give a full-size illustration, is far better, the blade answering the double purpose of cutting the slit, and lifting the bark, and the whole knife being no larger than can be conveniently grasped in the hand when open, the thumb resting upon the blade. The cutting part extends half around the end, and two-thirds of the length of the blade. That part of the end not sharp, is smooth and rounded, so that after the cut is made, this part may be slipped up under the bark on one side of the slit, and down on the other, just enough to start it. The cross-cut being made first, the other operations follow in very rapid succession. The buds having been cut from the stick, are held, half a dozen at a time, between the lips, and in a shorter time than we can describe it, may be inserted in the stocks. This knife is in common use in some of the nurseries about New-York. Our attention was first called to it by Mr. A. S. Fuller, of Brooklyn, who has been active in introducing it. We know of no place where it can be bought, but any cutler will insert such a blade in a common handle. The danger of bruising the young wood by the knife is very slight, for if the bark parts freely it is only necessary to start it by a slight lateral pressure, first on one side and then on the other, toward the top of the slit; the bark will be lifted enough to let the bud slip in, which, as it is slid down into its place, loosens the bark still more, if necessary. It is a good plan to polish the blunt edge of the blade used for lifting the bark.



For the American Agriculturist.

Hogs in the Apple Orchard.

Nobody sends such apples to market as my neighbor John Jacobs. He always has apples to sell and gets the highest price. Folks prefer fair, large apples; and such are always packed in Jacobs' barrels. You might search them with a candle and not find a knotty fruit or a worm hole. Such Rhode Island Greenings and Roxbury Russets I have never met with in the old States. They are as handsome as any thing in the virgin soils of the west.

I was going by Jacobs' orchard last Summer, and I had the curiosity to call and examine for myself. Says I, "Neighbor, what is there in your soil that makes such smooth, large apples? They are a third bigger than any thing I can get, and my trees look as well as yours."

"The secret is not *in* the soil," John replied, with a twinkle in his eye, "but on it. Do you see those grunters there? My pork brings me fifty cents a pound,—eight in flesh, and the balance in fruit. I began to pasture my orchard ten years ago with hogs, and since that time I have had no trouble with wormy fruit. Apples, as a general thing, don't fall from the tree unless something is the matter with them. The apple-worm and curculio lay their eggs in the fruit, and the apples drop early. The pigs devour the apples, and by September every unsound apple is gone and I have nothing but fair fruit left. The crop of insects for the next year is destroyed by the pigs. They root around under the trees, keep the soil loose, manure the land some, and work over what manure I spread. The apples help the pigs, and the pigs help the apples."

I saw John's secret at once, and have profited by it. I never had so few insects as this spring, and I give the pigs credit for it. In turning the orchard into a pasture put in *pigs*,—not landpikes with snouts like levers. You might lose trees as well as insects in that case. But well bred animals, with judicious snouts, will root in a subdued and christian-like manner. JONATHAN.

Perfect Trees.

These are almost as rare as perfect men. In the forest, all trees are crowded together, making only tall, naked trunks with heavy tops. On the outskirts of the woods they are one-sided. In the open fields the ease is often different. Here we occasionally see a tree which has had a chance to grow from the first as its nature demanded. Perhaps it is an elm. Its stately trunk rises aloft, braced up as it were by buttresses; then it divides into columns, spreading upward and outward on every side, and at the extremities, bending over and hanging down its graceful swaying branches—a perfect canopy of verdure. So the maple, beech, linden, and ash, occasionally present specimens of perfect development. And how pleasing is the sight, in contrast with the tall, lank, one-sided trees so common!

Perfect evergreens are still more rare. And this, because their perfection requires a uniform development of branches from the top to the ground. This, of course, is never seen in the woods, nor yet in the open fields, because strolling cattle and the farmer's ax forbid the growth of limbs within six or eight feet of the ground. We would by no means criticise harshly those which we do see, incomplete as they are. The contrast, on the wooded hills, of pine and fir with the lighter foliage of other trees is pleasing at all seasons, and never more so than in Autumn. But in the sense we are now considering, they are quite defective. Here and there, in the show-grounds of a commercial nursery, or in the lawns of fine country places, we see what approaches perfection. The tree is a complete pyramid. Its lower branches are the longest, and they lie, for the most part, on the smooth grass. From these up to the very apex, the limbs shoot out on either side, according to their own laws, swaying about at their own sweet will, a luxuriant mass of verdure. No two species or varieties of conifers are precisely alike; so there is no danger of monotony, even if all are allowed to grow in this way.

A tree so developed, whether deciduous or evergreen, is a pleasant sight. It seems to be answering the end for which it was created. It seems really to enjoy itself; whereas, a one-sided, dismembered tree awakens a painful sympathy. You feel as if the poor thing were only half a tree, and were suffering from hard usage, and might about as well be hewn down and cast into the fire. Nearly all our village and city front yards, and our cemetery lots, furnish sad illustrations of our subject. Now we desire, in our humble way, to inspire a better taste. The farmer and land proprietor should take special pains to save the fine trees which they chance to possess. In selecting young trees for planting, care should be taken to choose only well-shaped, vigorous specimens. Nurserymen should not crowd their stock into close rows, thus spoiling the symmetry of their trees; and if they do, planters should refuse to buy them.

Summer Pruning.

Now is the time to attend to this work. Yet it can hardly be called "work," for it consists chiefly in pinching off the ends of growing shoots, and can be done mostly with thumb and finger. Mr. Barry aptly styles it "antelipated pruning." Surely, it is better to *prevent* the growing of a limb in a wrong place, than first to allow it to grow all summer, and then cut it off; for in the latter case, there is both a loss of time and a waste of the tree's forces. By preventing the growth in one direction, we send its strength into another channel. We accomplish results in one year, which it would otherwise have taken two years to effect.

Here is a pear tree, on which the limbs seem perversely inclined to push out unduly on one side. Let us head them off at once, and encourage the development of buds and wood on the other side. We wish to train our pear trees into pyramids, with one central, leading shoot; but often a side branch grows more lustily than the central. By pinching it back several times we can keep it in place.

Here is a grape-vine with several shoots pushing out strong from a single joint, while at another, equally important, there are none, or very weak ones. Pinch out all but one from that cluster of buds, and pinch them a second time, if they start again. Here, also, is a fruit-tree which makes an abundance, yea, a superabundance of wood growth, but yields no fruit. What can we do, that will tend to throw it into a fruiting state? Try root-pruning, or try summer-pruning. By some means check the over-growth of wood-buds; this compels the accumulation of sap in the remainder of the buds, and converts them into fruit-buds. English fruit-raisers practice what they call *spurring-in*, on their trained trees, and find that it makes them very productive. This is founded on the principle we now advocate. Doubtless this practice was suggested by observing the fact that when the ends of a limb get broken or bruised during summer, it often becomes a fruit bearing limb the following year.

There is another sort of pruning which may well be done in mid-summer, viz.: the shaping of all kinds of trees by the removal of limbs and twigs, large and small. Ornamental and fruit-trees are sometimes neglected in their early growth, and it becomes necessary to take hold of them with a vigorous hand, and bring them into good form. This is often done in Spring, but not wisely. The injury from bleeding, the poisoning of the adjacent bark and wood, and the slow healing of the wound are all against severe pruning in Spring. Prune in mid-summer, and these difficulties are obviated.

With facts and principles like these in his mind, we counsel the reader to try his hand at pruning. We think he will not go amiss.

Tim Bunker on Stealing Fruit and Flowers.

"Where did you get them lalock blossoms and roses?" asked Seth Twiggs, as he saw Kier Frink driving home his empty coal cart, with his horse profusely decorated. There was a large branch between his ears tucked under the bridle, and a dozen or more of Dea. Smith's large damask roses nodding from the hames.

"Shouldn't 'zactly like to tell. I'm 'fraid you'd all be arter 'em, they're so handsome."

"Well, I can tell, you scoundrel," said Seth, as he tucked his stub of a pipe into his pocket. "The roses came from Dea. Smith's, and the lalocks from my yard, and they haven't been picked more than five minutes. You miserable White-oaker and thief, don't you know any better than to steal such things? I'll have you sent to Har'ford, for theft, sure as I am a live man."

"I should like to see you do it. They are nothing but posies, and haven't any more vally than the smoke of yer pipe, Mister Twiggs. They hung over the road tu, and I should like to know if anybody haint a right to what grows in the road. I wanted to make the ole hoss look kinder gay, and bring home something nice to the old 'oman and the young ones. I didn't mean any harm."

"Harm? you miserable scape grace!" exclaimed Seth, shaking his fist; "I would rather you'd taken the calf out of my stable, or the pig out of my pen. Didn't wife plant that bush, and hasn't it been growing these four years, and now it is all broken and ruined, and the flowers hang on that wretched carcass of a coal horse. It's enuff to make a Christian swear to see lalocks and roses put to such a use. If there is any justice, you shall go to Har'ford jail."

There, you see, was the rub. Seth Twiggs got angry to very little purpose. There is no law that touches these vexatious trespasses upon flowers and fruit;—or if there is, we have no public sentiment to enforce it. The majority of the public, even in this Commonwealth, which I am bound to believe is head and shoulders above any other in this respect, have no taste for flowers and the finer kinds of fruit, and they look upon the people who cultivate these things as lawful prey. Their own flower gardens are limited to a patch of bouncing bet and tanzy in the back yard, with may-weed and catnip in front; and as they do not attach any particular value to these things, they think their amiable neighbors who cultivate roses and flowering shrubs prize these just as little. They would as soon break down a moss rose in a neighbor's yard, as a sweet briar growing by the road side.

They admire gay colors and sweet odors as most savages do, and that is the extent of their taste for flowers. They have no other measure of value than money, and as flowers in the country do not sell in market, they have no value. A pound of butter brings twenty cents, and is worth the money. A rose, though it affords pleasure to the eye, and to the smell, and gratifies our love of the beautiful, brings no price, and is therefore worth nothing.

It is pretty much so with fruits, though there is a little more conscience about stealing them, for fruit has a money value, though it be small. Apples are common even among these rude people; but they are of the ungrafted sorts, and hardly pay to carry to market where the better sorts are known. But they think their neighbors prize fine pears, grapes, and the smaller fruits as little as they do their seedling apples. It was only yesterday that I found a woman and her two children in my strawberry beds, helping themselves as leisurely as if they had been picking in a cow pasture. They had brought their baskets with them, and had got them nearly filled, when I had to lay down the law to them. They had at least a dollar's worth of my property, and were about to walk off with it.

Now I don't want to say a word agin' Hookertown, or damage the reputation of the place. I suppose it is a full average of Connecticut towns, and in some respects a good deal better. But to speak the plain truth, there is a good deal of stealing among us in this small way. And it can't be laid to the door of the pulpit neither. Mr. Spooner is faithful—preaches total depravity just as hard as if people did not illustrate that doctrine themselves—warns, entreats and expostulates with all long-suffering and patience. But you see the most of these people don't come to meeting, and the preaching that is going to reach them, I guess, will have to be in men's lives rather than in meeting houses.

The notion that nothing is of any value unless it will sell, seems to lie at the bottom of a good deal of this wickedness, and I think a word or two ought to be said upon it. Now this may be true with a great many people. They are so mean that they would skin flints to make money. But among decent christian people this can't be so. A man prizes a good many things that have no money value, far more than if he could turn them into gold. There is an old lap stone, such as shoemakers use, in my garret, that belonged to Sally's grandfather. He used to use it, and when she was a little child she remembers seeing the old man pound leather on it. Now I don't suppose the stone would sell for a red cent, but Sally says she would not part with it for the Kohinoor diamond, and all the crown jewels of Victoria. She is an honest woman, and I am bound to believe her. Anything that our affections enter into has a value that can not be measured by dollars and cents; and to rob us of these things is to do us a greater injury than to steal sheep and horses. I can't blame Seth Twiggs for raving about his lilac bush. His wife planted it and had a right to rejoice in it. It was rather hard to see the growth of years destroyed in a moment by an ignorant boor.

We cultivate flowers and learn to love them for their beauty, and for the pleasure they give our wives and children. They cost considerable time and money, and really give more pleasure than many things that cost ten times as much. They are associated with our leisure hours, and our domestic enjoyments. They seem to belong to the better side of our natures. We have a moss rose under our bed-room window that little Sally planted when she was a school girl. It hangs full of blossoms every year—not worth a cent. But I declare I had rather lose a half dozen of the best apple trees in my orchard than that worthless shrub.

It is very much so with our nice garden fruits. We raise them because we can't buy them in the country, and don't want to beg or steal them. I cultivate grapes and pears, and get a good deal interested in the vines and trees. I spend days in training them, and enjoy my power over them. They have a value to me above the market price, because they are the product of my skill. I have watched that bunch of grapes from its blossom to the purple bloom upon its ripened berries. I have watched those ruddy cheeked pears quite as anxiously, and anticipated the delight of setting them before my friends, when they pay me a visit. When the friends are gathered for the feast, it is a sore vexation and disappointment to find the fruit missing. We need more efficient laws to protect us against fruit and flower thieves, and above all a wider diffusion of a taste for these things, which will prove the best safeguard against their loss.

Hookertown, June 14th, 1862.

Yours to command,
TIMOTHY BUNKER, Esq.

Horticulture Artificial.

A young farmer writes us that he thinks nearly all the operations of horticulture artificial. They interrupt and prevent nature's laws and processes, and so induce disease, decay and death. He inveighs against pruning, grafting, budding, cutting off the tap-root of seedling trees, manuring, etc. Why not allow trees to grow naturally, and vines to clamber unrestrained over tree-tops and hedge-rows, and all to get along without any extra fertilization? There is a grain of truth in our young friend's theory, but hardly enough to keep it ballasted.

As to the tap-root; suppose we did not cut it off while small, in the nursery row, who could transplant the tree when it had grown a few years? The tap-root would be far down on the road to China, and the side-roots would be very small. As to budding and grafting, it is very true that crab-apples, choke-pears, and other wild fruit will answer to keep men from starving, but they will not quite satisfy the common wants of civilized people. As long as grafting will give us a plenty of Seckels and Northern Spys, very naturally we shall try to get them, "unnatural" as the process may be.

As to pruning and training, doubtless this is sometimes overdone, but perhaps it is as often wholly neglected. Some kinds of shade trees take a very straggling, lop-sided habit, and need a little improvement in their manners. Some fruit-trees make excessive wood-growth, and need a little cutting back, at the proper time, to induce fruitfulness. Of course, we could have no hedges, without the pruning-shears. The grape vine would yield us only small, second-rate fruit, if we allowed it to run wild on the trees; but it gives us more and better fruit, if confined to the trellis; and certainly it is easier to gather. A pasture or hay field is all well in its place, but a smooth lawn, well graded, mown and rolled, is a far finer sight for the neighborhood of the house. A gravelled walk, a bed of flowers, or even a cornfield, all are artificial.

And so we might go on; but our friend will not need further argument or illustration. Nearly all our agricultural and horticultural operations are artificial, but no reasonable man condemns them for that. Yea, even our moral virtues are artificial, in the sense of being "contrary to nature," but we prize them none the less for that. Rather, are we profoundly thankful to the Great Husbandman whose loving care has grafted them upon the wild olive tree.

Skilled Labor for the Garden.

There are some who, for various reasons, can not or will not work. They must depend chiefly on hired labor. And if they wanted only the plainest kind of work done, this could be easily got along with, for there are scores of laborers at every corner waiting to do this. But when it comes to such work as planting hedges and training them, pruning grape-vines and pear-trees, laying out flower-gardens and setting out shrubs and plants, how few laborers can be trusted! The good natured merchant directs Patrick, in the morning, to set out a few rows of dwarf-pears, and several grape-vines, and then goes to his place of business, flattering himself during the day that all is going on well. But on coming home, at evening, he discovers that the rows are as crooked as a rail-fence, and on examination finds the roots of his vines and trees jammed into little post-holes, then covered with soil, and spatted down very smoothly! "Faith, sir, that's the way I usht to do it when I was head-gar-r-dner to the Duke of Devonshire."—And so it goes, day after day bringing its several blunders, until the poor man is worried almost to distraction.

In all our villages and large towns, there are many families who are unable or disinclined to keep regular and permanent hired men, and yet have more or less gardening to do all through the Summer. They want their seeds sown in the Spring, then their hedges trimmed, or their grass-plot mowed, and their gravel walks cleaned. Widow Smith wants her lot in the cemetery put in order; Dr. Jones must have his grape-vines pruned and tied up. Nearly all of these persons know little about gardening, or have not the time to superintend it.

Plainly, then, we want not only laborers, but skilled laborers,—men with brains as well as muscle, and with both brains and muscles trained to do a specific kind of work. Were we better supplied with such workmen, our country homes would be managed with more ease, and with greater satisfaction to their owners. The professional or the business man could then go to his daily employment feeling that his garden and lawn will not be spoiled during his absence. Our grounds would rise to a higher point of excellence in their arrangement and keeping.

How best to multiply such a class of laborers, we hardly know. They must be trained somewhere, for they do not grow spontaneously. In the commercial nurseries, and large gardens near cities, and on the finest country-places of the land, there are many young men who, by a little pains on the part of their parents or overseers, might soon be trained into intelligent, skillful gardeners. If then, they should advertise in the leading agricultural and horticultural papers, they would surely find lucrative places. Would that many young laborers, now content to do only the commonest kinds of field work, would learn the art of gardening. It is an honorable, pleasant and profitable employment. The result even then would be that more lucrative places would offer so freely to this class, that the want we allude to would still go unsupplied. The only remedy after all, seems to be a diffusion of practical knowledge of gardening among all educated people, affording them enjoyment, exercise, and ability to direct laborers.

CHILDREN AND FLOWERS—*Engraved for the American Agriculturist.*

The love of flowers is to be cultivated, not extirpated, as is so often attempted by ignorant or heedless parents. It is not a proof of depravity that your child loves to ramble in the meadows and woods after lilies and wild roses, more than to hoe potatoes and corn. He does not deserve a thrashing, because he lingers by the roadside to pluck violets and dandelions, when he is sent to turn away the cows. He can not help admiring the dew-drops that hang like jewels on the flowering grass, and the morning songs of the birds. His soul is full of boyish rapture, and he is unconscious of the passing moments. He does not deserve ridicule, or a scolding, when he asks for a patch of ground where he may plant rose bushes and flowering shrubs, pinks and asters. It may be that the potato blossom, or rather bulb, has more charms for you than all wild flowers, or exotics in the garden. The children have not learned to measure by your standard. They will find pleasure in things that are good for nothing but to look at, and smell of. They are taken captive by the delicate coloring of the petals, and the aroma of the opening flowers; and who shall say that they are not as rational in their admiration as the man who measures value by the market price in gold? For what has God given us these instincts, if they are not to be gratified and developed, and have their appropriate place and exercise in forming the symmetrical character?

It is a good plan to give children portions of ground near the house to plant with flowers and flowering shrubs. It does not necessarily involve much expense or patronage of the nurseryman. With a little encouragement they will supply themselves from the meadows and woods in their own neighborhood. Let them transplant violets and butter cups, blood root and lilies, golden rod and cardinal flower, winter green and prince's pine. There are hundreds of pretty wild flowers that will flourish in the garden under their care, and make home attractive. What can be finer than the azaleas, the high and low laurel, and the rhododendron? They will bring to light many gems of the field and forest unknown to you, "flowers that waste their sweetness upon the desert air."

This love of the beautiful is to be educated, and if we will but give nature in them a fair chance, the education will not be half so expensive as that of the schools. Let them have occasional holidays, the boys and the girls together, in which they may go after flowers and berries in the woods and meadows, and by the mountain streams, and enjoy nature to the full. Picnics are in season now, and we have sometimes thought that they did old folks quite as much good as young ones. The perfection of a lesson in esthetics, is a dozen families or more, parents and children together, encamped in a wood on a Summer's day. It costs comparatively little in the way of preparation, but pays abundantly—the children can tell you in what.

Bouquets Gratis.

Every person who owns a good flower garden, is annually beset by visitors asking for bouquets. In some cases the flowers will be appreciated, but in many others, not. Many want them to pull to pieces, or to carry up and down the street, and finally to throw away. To such persons, it is hardly worth while to give choice flowers, if indeed any: it is money and labor, and rare beauty and fragrance thrown away. Many of these "beggars" have land enough at home, but are too lazy, or have too little real love for flowers to make gardens for themselves. They like very well to come and avail themselves of the fruit of your time and industry. Now, for these, and all other persons who do not appreciate the real worth of flowers, we would say, give them nothing, or else have at hand a lot of cheap, showy plants from which one can cut to *their* satisfaction. The marigolds, the annual larkspurs, monkshood, Drummond's phlox, candytuft, scabious, etc., will furnish a good assortment. Give them these, and it may awaken a love for something better.

But to others who heartily love flowers, and who will appreciate and preserve the bouquet given, as long as it can be kept, we would say, give choicer kinds. The finest roses, carnations, verbenas, geraniums, heliotropes, and others of sweet perfume and delicate beauty, should be freely bestowed. They will confer great pleasure, and will strengthen the ties of friendship.

Summer Fruits.

The season of fruit is one which gives employment to all who take any interest in their cultivation, in investigating new varieties, and extending one's acquaintance among those prized or cultivated by his neighbors. Every spare hour may thus be profitably spent. The strawberries are already past, and the lessons of the season have been well learned, we hope. Certainly, the value of the fruit to the public was never before so well demonstrated. The first week in July finds cherries in their prime over most of the country; and when any one who has been in the habit of esteeming the black and red mazzards, which are to be found almost universally over the country, as delicious, first enjoys a taste of the Black Tartarian, Black Eagle, or several of the Bigarreaus, it is almost as though an entirely new fruit had been

introduced to his notice. The more one knows of varieties of fruits, and the more one studies their peculiarities of flavor, the better is he able to appreciate their differences. When a man finds out that the grapes which he gathers on the mountain, and enjoys so well, are considered by those who claim to have a cultivated taste as next to worthless; and when he sees that with the finest of fragrant clusters he can not tempt them to taste a single one, no wonder he says: "Out upon such delicacy of taste—it is whim and nonsense." Still it is no nonsense. The taste, properly cultivated, affords us very refined enjoyment, and this too without the temptation to eat too much. He that eats any thing with pleasure, will be almost sure to gluttonize. He that enjoys only the very best fruit, has a higher enjoyment, is more benefitted, and seldom or never eats fruit to excess. These remarks apply equally to all kinds of fruit. At this season, study particularly currants and raspberries.

Double Yellow Butter-Cup.

This is a variety of the common butter-cup, (*Ranunculus acris,*) made double by cultivation. The cut gives a very good idea of the size and form of the flower—which is very perfect, and retains the brilliant color and gloss of the wild variety. It is perfectly hardy, growing in any common garden soil, and is propagated by dividing the roots, either early in the Spring, or so soon as it is done flowering in Summer. It is well worthy a place in the garden.

Endives, Culture, etc.

Green salads are, at all seasons of the year, very refreshing and healthful articles of food. At the very head stands lettuce, particularly those kinds which form heads readily: but few or no kinds will bear the heat of Summer. They will not head, acquire a disagreeable bitter taste, and are tough. The delicious salad named above comes in to supply the place of lettuce during the heats of August, and remains in perfection during the Autumn and Winter. It may be sowed at any time during the Summer, up to the first week in August, needing good deep rich garden soil, frequently stirred. There are several kinds. We prefer the broad-leafed variety. Sow in drills, and transplant 12 to 14 inches apart. As the plants grow they may be watered with liquid manure, and if the ground is well and frequently hoed, they will grow rapidly, spreading out a mass of leaves, lying flat on the ground, 12 to 14 inches in diameter.

If wanted for summer use, when they have attained the size of a dining-plate, the leaves are gathered together when dry, and tied with a piece of bass-matting or string. After a heavy rain, should one occur by which the inside of the plants are wet, they must be unbound and opened to dry in the middle of the day, and bound up again before the effect of the bleaching is lost. The blanched portions form a very pleasant summer and autumn salad. The chief excellence of the endive is seen in Winter.

After frosts have cut down tender things in the garden, we pull up the endives, remove any decayed leaves, and set them out in the sand-beds in the cellar, closely packed together. Very soon they begin to grow, and the new growth is beautifully blanched, while the tenderer portion of the older growth bleaches also. The largest and most vigorous plants are earliest fit for the table, and others follow in succession. We heartily commend the culture of this salad, which is so great a favorite upon European tables. There is always a ready market for the bleached plants among our German population.

Mushroom Culture.

Mushrooms are greatly esteemed on account of their peculiar and delicious flavor. They may be stewed, fried in fat, or made into catsup. In some countries, Russia and Poland among the number, there are said to be above thirty kinds in use. They are there gathered at different stages of growth, and used raw, boiled, stewed, roasted, and even dried for winter use. Great care must be exercised in selecting mushrooms for eating, as there are poisonous kinds. Three ways are recommended by which to determine whether they are good: 1st, by the color of the gills, that of the good kinds being, when young, of a fine pink, or flesh color, changing, however, to that of the questionable kinds—a chocolate color—at more mature growth; 2d, by the smell, the good kinds emitting an agreeable odor, while that of the bad is nauseous and disagreeable; and 3d, by sprinkling salt upon the inner or spongy part, unwholesome kinds turning yellow, and edible kinds black. Bad kinds are found mostly in forests; edible ones in open pastures, most frequently in old horse-pastures, which sometimes, in damp, warm seasons, yield large crops.

Mushrooms may be grown at any season of the year, by those who have a suitable bed. This may be made in any dry cellar, (or under a shed,) the temperature of which can be kept at from 50° to 60°. Extremes of temperature must be avoided. The temperature of the bed should be from 70° to 75°. A bin or bottomless box about 20 inches deep is suitable for a bed, and one four feet wide by eight feet long, if properly managed, will yield a supply for a good-sized family. On the bottom put a thin and slightly oval layer of ashes and gravel, or pieces of bricks, to avoid dampness. Next put in a six-inch layer of unfermented horse-droppings from grain and hay-fed horses, (not grass-fed,) the dryer the better, with short straw intermixed. When this, being exposed to the air but not to rains or dampness, has become quite dry, cover with two inches of dry earth—sandy, if possible; into the surface of this introduce small pieces of spawn in rows six inches apart. Then repeat the layer of horse-droppings, and short straw, and of earth, with spawn introduced as before. Cover the whole with two or three inches of fresh, warm horse-droppings, and occasionally sprinkle with blood-warm water, to induce fermentation, the top layer of fresh manure to be removed as soon as fermentation has caused the spawn to begin to spread. In five or six weeks mushrooms may be expected. The usual size is from 1½ to 3 inches in diameter, but those over 4 feet in circumference, and weighing 12 to 14 pounds have been produced.

Mushroom spawn is usually to be had in seed stores, and also may be found, of uncertain qualities, however, in dry lumps of horse dung, in old pastures, hot-beds, and manure heaps. It has the appearance of dry, white threads. The following method of manufacturing sale spawn is recommended by Bridgeman: "A quantity of fresh horse droppings mixed with short litter, should be collected; add to this one-third of cow dung, and a small portion of good earth, to cement it together; mash the whole into a thin compost, like grafting clay; then form it in the shape of bricks; which being done, set them on edge, and frequently turn them until half dry; then with a dibble make one or two holes in each brick, and insert in each hole a piece of spawn the size of an egg; the bricks should then be laid where they can dry gradually. When dry, lay dry horse-dung on a level floor, six or eight inches thick; on this, pile the bricks, the spawn side uppermost. When the pile is snugly formed, cover it with a small portion of fresh warm horse-dung, sufficient in quantity to produce a gentle glow through the whole. When the spawn has spread itself through every part of the bricks, the process is ended, and they may be laid up in any dry place for use. Mushroom spawn, made according to this recipe, will preserve its vegetating powers for many years, if well dried before it is laid up; if moist, it will grow, and soon exhaust itself."

Mushrooms of good quality find a ready sale in New-York, and doubtless in other cities, if the discretion of the gatherers or raisers may be depended upon; and they would soon become a favorite article of food if they were more commonly cultivated for the market.

Raising Cauliflowers.

Not the least among flowers is the savory cauliflower. So every epicure will say. So every one who enjoys good food will say, and so say we. To grow this vegetable well it is important to give it some care. Start the seedlings, as we do common cabbages, in a warm rich border. For winter and fall use, the plants need not be set out before the 10th of July. Prick them out once or twice in the border, before giving them their final place in the open ground. This will make them strong and stocky plants. In choosing a spot for transplanting them, let it not be in the shade of trees or fences. The soil should be deep and rich. If not so naturally, break it up with a long spade, and put a shovel full of manure at the bottom of each hole, covering the same with two or three inches of fine earth. With a garden trowel, lift the plants and set them out in rows three feet apart, and two feet and-a-half in the row. If the weather be dry, shade them for a few days. Keep the ground loose by hoeing, but do not earth up the plants much, as this often induces rot.

Unless the ground is naturally moist, it will be well to cover it in mid-summer with strawy manure, or with clean straw. Once a week, pour over this mulch the refuse water of the kitchen and chamber. In September and October you will enjoy the results of these labors.

Garden Culture of Celery.

This old British salad is a great favorite with epicures, but it is less generally cultivated than it deserves. Probably it can not be shown to contain much real nourishment for man or beast, yet it makes a fine relish. The stalks, when blanched, may not only be used raw, or for salad, but may be stewed or used for seasoning soups. In its wild state, it grows in marshy ground and by the side of ditches, where it is known as *smallage.* In that state its taste is rank and coarse, but when cultivated and bleached, it becomes delicate, sweet and crisp.

There are many kinds for sale at the seed-stores, advertised as Mammoth, Giant, Excel-

sior, etc., but they may all be reduced to two classes, the *White Solid* and the *Red Solid*. The only difference between these is in their color, and the ability of the red to stand frost a little better than the white, and its being more uniformly solid, while the white is more delicate in flavor. The difference in size is the result of cultivation entirely.

To secure good plants, the seed is best sown in a cold frame, and when an inch or two high, pricked out into the open ground, in a warm, sheltered border, and it is well after ten days or two weeks to move them again, leaving the plants three or four inches apart. These several transplantings make them stocky and harden them off for final setting in the trenches in June or July, or even as late as the first of August.

For planting, choose a rich and level piece of ground, dig the trenches eight inches or a foot deep, a foot wide and three feet apart. Remember to throw the top-soil on one side of each trench by itself, and the poorer soil on the other. The trenches should, if convenient, run north and south, though this is not essential. Give the ground in the bottom of each trench a thorough enriching with old manure; leaf-mold mixed with the remains of an old hot-bed is the very best thing. Having watered the plants thoroughly the evening before, they will be in good condition to take up. Use a garden-trowel, taking up as much dirt as possible with each root. Some recommend clipping the loose leaves and the extremities of the roots on re-setting. Let the plants stand in the trenches four or five inches apart. If the weather is hot and dry, water the ground well, and for a while lay a few loose boards over the trenches by day.

The after treatment is simple, yet it is of the utmost importance that it be rightly done. Keep the ground well stirred with the hoe, that the plants may grow rapidly; if the weather is dry, watering must be resorted to. Do not be in haste to "earth up." About the middle of August or first of September, is soon enough. In doing it, hold the leaves of each plant together with the left hand, and with the right draw the soil around the stalks several inches high, using the best soil thrown out of the trench, rejecting the poor. But use the greatest caution not to draw the dirt into the center of the stems, as this will cause them to rot or become very rusty; and do not *press* the soil too much towards the stalks, as this will check their growth, but it must be tightly packed down in order to turn the rain. Repeat this earthing up once a fortnight, using the same care in doing it.

Before hard frosts set in, in the Fall, the plants should be lifted, taken into the cellar, and set out with little earth adhering to the roots, in nearly dry sand. They will grow and blanch in the cellar, and may be used for many months.

Movable Frame Bee-Hives.

It is well known to all bee-keepers that bees ordinarily build their combs in more or less uniform perpendicular cards or curtains, about 1¼ inches from center to center. If guides, made of thin strips of comb regularly fastened to the top of any chamber of the hive, are provided, these will be followed, and the combs made with similar regularity. Where any rather rough edges are similarly presented, the result is the same. The cards of comb are attached to them, and if the edges are straight and not too far apart there will seldom be any considerable irregularity. In all movable frame hives, the aim is to present such edges at proper distances, so that the bees may economize all the room in the hive, and that we may remove any one or all of the frames with the comb attached at pleasure and without disturbing the other combs. This, Mr. Langstroth accomplishes by using oblong frames, like slate frames, the upper edges of which, when in position, are so much longer than the frames that the frames may be suspended by them in a box. Others use frames of different shapes, some arranged to draw out sideways, which is attended with many inconveniences; others are triangular to accommodate slanting floors which facilitate efforts of the bees to keep the hives clean; and another plan is to have the frames hinged, so as to be swung apart when the hive is opened, like leaves of a book held perpendicularly. For these and other forms and combinations with them, of various supposed or real advantages, letters patent of the United States have been granted. But the fundamental idea of movable frames, which the inventions of Mr. Langstroth first rendered practically useful in this country, was early in the present century put in practice by Huber, a Genoese apiarian, and subsequently by others both in Germany and Great Britain. A person of ordinary ingenuity, living where the movable frame hives can not be bought, can easily adapt frames to a square box, taking care chiefly to present a rough, narrow edge (as left by the saw) for the comb to be attached to, and not allow the frames to come anywhere so close to the box that the bees will cement them to it, and taking care also not to give so much space that they will build a line of cells between the frame and the sides.

Keeping Swans.

Who that has seen the swans in the Central Park, in this City, or on the little lake in Mount Auburn Cemetery, Boston, does not wish to adorn his own pond or stream with a few of these graceful water-fowl? We are glad to learn that they are being introduced into the grounds of many private residences throughout the country. These birds are often called "tame swans," "domestic swans," and so on; but, let it be remembered, they are not so very tame, after all; they never become so quiet and home-loving as the goose or barn-fowl. They are constitutionally wild and capricious, and need watchful care; though apparently very tame and familiar toward those who feed them, or from whom they expect no harm.

At the outset, they must have good water-privileges. A lake, or a pond of good fresh water, will answer. Take no pains to clean out the weeds and rushes which chance to grow near the margin of the water, for it is among these that swans delight to ramble and feed. They love corn, oats, barley, etc., but their natural food is seeds and grass, insects, worms, larvæ, and mollusks. When grain is fed, scatter it just on the shore and in shallow water near the shore. They love the waste vegetables of the garden, and all the more for being half-decayed. Watch their eating habits, and you will observe that they prefer to eat by "suction," rather than by picking up their food like a hen. They love to dive their heads under water, and suck down the soft, half-rotted vegetation on the sides and bottom of the stream. Thus they act as scavengers, purifying the stagnant waters that would otherwise become foul and unwholesome. In Holland, they are considered very beneficial in this respect. If they will swallow down miasms and fevers for us, and harmlessly to themselves, we ought to thank them.

In buying a pair of swans, it is best to get young birds, for the old are hard to domesticate in a new place. But in purchasing cygnets, be sure and get birds of opposite sexes, a thing not so easy to determine by their plumage. Two males will quarrel, and two female-birds, though they live pleasantly together and lay eggs, of course will raise no family between them. Get husband and wife, and all will go off well. To ascertain the sex, put several cygnets into water, and those which swim deepest, (i. e. sink deepest,) will prove to be females. After fixing upon your pair, have them securely pinioned. And then, to prevent their flying away from your grounds some fine day, have the last joint of each wing taken off. Let this be done at the place of purchasing the birds, so that they may have no unpleasant associations with their new home. This can be done so as to disfigure the bird but very little. When they reach their new quarters, treat them kindly, keep them quiet, and feed them regularly.

The male bird is capable of increasing his kind when two years old; the female not until three years of age. When they show a disposition to breed, they should be supplied with a bushel or two of coarse litter, such as straw, rushes, stalks, and a few sticks. They will work this material up without any instruction. They lay from six to ten eggs before setting. When the female commences her maternal labors, nobody should approach her nest. The male bird will sail very proudly and defiantly up and down before the nest, and wo to the youngster who dares to approach the sacred bed!

A fat young swan makes a capital dish. From October to Christmas, these birds are in prime order for the table. After that period, they are not as good—the turkey excels them. Well fattened, they weigh, in their feathers, from 25 to 30 pounds. And now, hoping that we have got our readers into a good appetite, we leave the subject, intending to resume it again in due time.

Luncheon.

The habit of eating five meals a day during Summer, and especially in haying time, came over with our fathers from England. The custom perhaps originated in certain peculiarities of their climate. The summer days are longer than with us, and the fair days for gathering the hay and grain harvests are fewer. It was necessary for the laboring force of the farm to make the most of these fair days, and to work while the light lasted, sixteen hours or more. More food was necessary to sustain the body under such prolonged exertion.

Our work is severer in Summer than at other seasons—more so formerly than now, when the horse-reapers, and mowers, and rakes, have lifted the farmer's heaviest burdens, and put the hay and grain harvest completely within his power. Whatever apology there may have been for working fifteen hours a day, in the last generation, there is none in this. We do not believe anything is gained by more than ten hours of severe labor in the field daily. This, with the chores at night and morning, will be as much labor as the body ought to sustain, taking the season through. In a single day, a man may do more in fifteen hours than in ten. In a month we think the man laboring ten hours a day only, will accomplish the more. The overtaxed system must have rest, or break down. If it can not get it in the bed at night, it will take it in the field, inadvertently, if not willingly. There will be lagging, want of spirit, and slighted

tasks, showing that the energies are not in the work. Luncheon is for long days and over-work. It is based upon a wrong philosophy of labor.

With a better arrangement of the meals, and the hours of labor, luncheon may be dispensed with to the great relief of the women of the household, and to the advantage of employer, and laborers. The breakfast should be out of the way and the men be in the field by seven. They can work five hours comfortably, when six and a half would be an injurious strain upon the strength. They come to the noon meal at twelve, with a good appetite, and at one, are ready to resume work again. They work vigorously until six, when if they knew they were not to be dismissed until sunset, or dark, they would hold back. We have followed the ten-hour system with our laborers upon the farm for several years, dispensing with luncheon, and have no doubt it is good economy. With good calculation, it is seldom necessary to overstep these bounds. If a storm threatens, and more work is necessary to get hay into cock, or into the barn, men are always ready and willing.

Suggestions for Health-Preservation.

The season is now upon us when, owing to the summer heats and atmospheric influences, fevers prostrate, and diarrheas exhaust multitudes who, during less debilitating seasons of the year, are comparatively exempt from disease. Yet this class of complaints may generally be avoided. The readers of the *Agriculturist* should be well enough acquainted with the subject of Health-Preservation to know that it does not depend upon medicines. These would rarely be necessary, if we were as anxious to take care of our own health as a thrifty farmer is to take care of his sheep and hogs. Men are apt to employ less common sense in their own behalf, in this regard, than in behalf of their swine! They will carefully study and profit by information relative to the ailments of their herd, and how to avoid them, while the preservation of their own health, and that of their children, is a subject rarely thought of. Worse still, sparing neither pains nor expense to procure the most wholesome food for their animals, they debilitate their own stomachs with that which they *know* to be unwholesome. The general rules and requirements of health are simple and easily learned. In fact, one has but to watch the sensations of his olfactories, skin, and stomach, and *heed* them, to keep clear of all danger from ordinary diseases. The sense of smell warns him against inhaling impure air; the skin, by dryness, feverishness, or irritation, indicates a want of that frequent bathing, which is so essential to health; and the stomach calls for food when needed, repels it when enough has been eaten, and in a natural state, betokens generally that which is unwholesome. A little extra pains to notice these indications will greatly sharpen the perceptions.

It may be set down as a general rule that ordinary diseases can not obtain a foothold where only pure air is inhaled, the skin is clean and healthy, and the stomach kept in good condition. The latter involves the most difficulty, owing to the depraved habits of diet in "civilized" society. But a few rules, well lived up to, will rarely fail, viz: Be regular as to time of eating; do not exercise violently either immediately before or immediately after meals; and let the last meal of the day be light and easy of digestion, so that sleep may be undisturbed and refreshing. In the morning, any billious disturbance of the stomach is known by the bitter taste in the mouth. *Heed this warning*, by restricting diet to plain bread, vegetables, and ripe fruits; and if it increases, go without supper, and take a thorough warm water bath—rinsing off in cool water—just before retiring to bed. As a general dietetic rule for Summer, persons in any degree delicate should use plenty of ripe, raw, and cooked fruits at meals, and but little, if any, fat meats. Let all dietetic changes be gradual; and for the most part use food that requires chewing, *and chew it well*, in order to give the stomach the full benefit of the assistance of the saliva in digestion.

Avoid sudden changes in quantity of clothing, cooling off suddenly when heated and perspiring, and all sudden changes. In keeping the skin clean, do not neglect that most important part, the scalp.

For the American Agriculturist.

Taste in Dress.

Tight sleeves are becoming fashionable now on our prairies, where they are so much needed. Prairie winds are cold and searching, and loose sleeves in Winter, at least, are next to no sleeves at all. Flowing sleeves have been so long in fashion, however, that people are tardy in giving them up, though for housekeepers they are the most slovenly sleeves ever invented, not to speak of the shivering look they give in church or street, with short gloves, and bare arms as red as a lobster. Fur cuffs on bare arms is but one remove, but add white undersleeves, whether of muslin, or zephyr, and the change to the wearer and looker on is very great.

It is said that when a French lady, from the country, comes into Paris to refurnish her wardrobe, she puts herself and purse into the hands of a female *modiste*, who measures her, takes her stature, complexion, etc., into consideration, and to whom, at the end of a week, she returns for a complete suit of clothes. The French women are not pretty, as a general thing, but their charming taste in dress makes them queens of fashion the world over. And while some women are born with an innate perception of the beautiful, there are others to whom the harmony of colors is a dead letter. The other day I was shopping in Lanark, when I met a woman who came recently from the East; she had on a splendid *moire antique* dress, with a trail to it, which looked anything but at home in the muddy streets of our new prairie town. I glanced upward at her bonnet, it was a summer straw, with green trimming outside, pink roses inside, and *yellow* strings.

One of the prettiest girls I ever saw was a young lady with curly, red hair; some might have thought that the color of her hair detracted from her beauty, but I didn't; her complexion was such a mixture of the rose and lily, that her exquisitely dressed hair seemed a fitting accompaniment. She never wore distinct green, red, or blue dresses, as I have seen so many of her complexion wear. "What a blaze she makes," she said to me one day as we met a red-haired girl with a maroon bonnet and cherry-colored strings. There was truth in the remark.

Dark complexions seldom look well in distinct black or white bonnets; if the bonnet is black, crimson flowers or ribbon with a white ronche is a great improvement, and pink trimming always relieves a brunette complexion in a white bonnet.

Carroll Co., Ill. MRS. M. J. STEPHENSON.

Fruit in Bottles.

On account of their abundance and cheapness, we shall put up a large quantity of berries and other fruit this season. With most of them, the plan given in the June *Agriculturist*, page 181, will be followed, though we shall try a few of each sort simply bottled in water raised to the boiling point. Some of the pickle and preserve dealers keep them thus with entire success. The directions given are to procure the regular pickle bottles, with long necks, and without shoulders, and to use long, soft, close corks, that will admit no air. The bottles are filled with the fruit, and water poured in to within half an inch of the top. The corks, softened in hot water, are forced with a mallet at least an inch into the necks of the bottles. Tie the corks securely with two strings crossing each other. Then set the bottles upright in a wash-boiler of cold water reaching nearly to the corks, and heating the water, keep it boiling say five minutes, when they may be taken out and set away. We know of raspberries and other fruit having kept thus for two years.

Pleasant and Wholesome Summer Drink.

The juice of currants, put up in air-tight bottles, affords a foundation for a delicious and wholesome beverage. Put enough water with ripe currants to prevent their burning; heat in a preserve-kettle nearly to boiling; transfer to a bag suitable for straining and press out the juice; add half a pound of clean sugar to each pound of juice and boil, skim, and put up as recommended for putting up the fruit. The juice alone will keep as well, if not better than the fruit, and, mixed with from one to two parts water, according to the taste, it makes a most refreshing drink. Being entirely free from alcoholic or intoxicating properties, there is no danger of the creation of an appetite for strong drink resulting from its use. It might profitably be kept for sale by druggists at all seasons of the year, and we presume that putting it up for that purpose may be made a source of income worthy of the consideration of currant-raisers who now make wine. Those who usually have more of this abundant fruit than they know what to do with, may find it for their interest to take note of this suggestion.

Unleavened Bread.

D. M. Adams of Worcester Co., Mass., writes to the *Agriculturist* endorsing E. W. Knight's remarks on bread-making, and adds: "I am a dyspeptic, and must say that I have derived more benefit from the change from leavened to unleavened bread than from any other dietetic change that I have made. If our good Editor can not endorse it, I can to the fullest extent, and with his permission should like to give my way. I stir as much Graham meal as I wish to into water; if I want soft spongy bread to eat warm, I stir it quite thin, if to eat cold, I prefer it stirred pretty thick; it makes a much lighter, sweeter loaf than can be got in a more artificial way. [The mixture of flour and water, thus prepared, is, probably, then simply baked.—ED.]

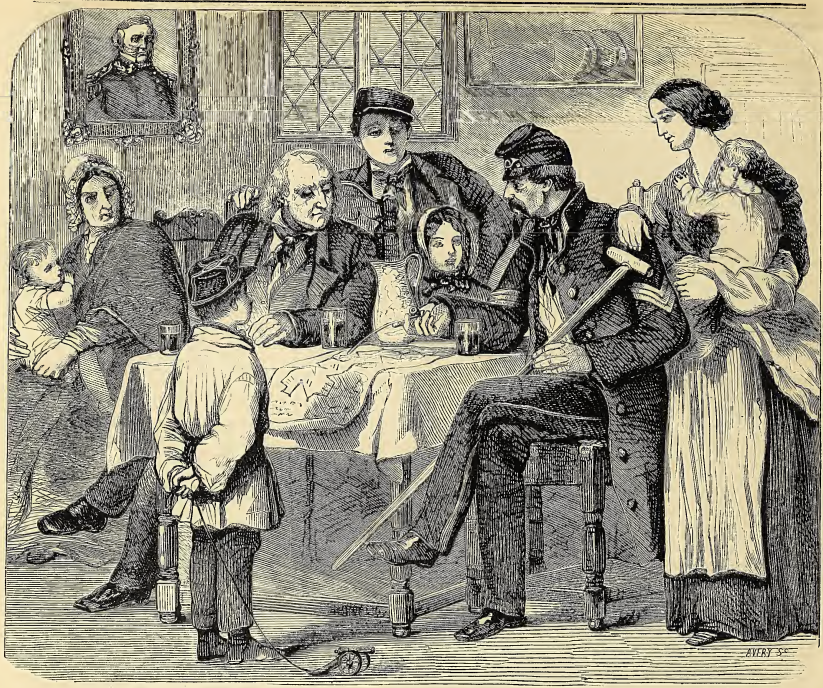
Various Recipes.

Flour Pudding.—The following is the recipe of a delicious, as well as a cheap pudding: 1 cupful of white sugar, 3 tablespoonfuls of melted butter, 1 egg, 1 teaspoonful of cream of tartar, ½ teaspoonful of soda dissolved in 1 cup of sweet milk, and 1 pint of flour. Flavor to the taste, and bake in a tin pan. To be eaten with hard or soft sauce. IDA J. RAYNOR.

Rhubarb Wine.—Take 4 lbs. of rhubarb to 1 gallon of water, squeeze it, put it into a tub, and pour the water on it; let it steep 3 days, then strain off the liquid; put 3½ lbs. of sugar to every gallon, and put it into a barrel, stir it every day for a fortnight, then add a few raisins and a small quantity of isinglass, then bung it up for three months. Finally bottle it, and in 5 or 6 weeks it will be ready for use.

Elderberry Wine.—The following recipe, from an unknown source, has been tried by an acquaintance, and proved good: 1 quart juice, 3 quarts water, 4 lbs. sugar, and 1 tablespoonful yeast to the gallon. Put it in a cask, in a cool situation, keeping the cask full. It soon ferments and discharges froth from the bunghole. When the fermentation is over, bung up or bottle. Boiling juice injures it.

Vegetable Soup.—Take a good sized chicken, or an equivalent piece of beef or mutton, cut it up and put it in water, rather more than enough to cover it, adding a tablespoonful of salt; boil until nearly tender, skim off the fat; add butter, salt, and pepper, and more water if necessary; then slice into the soup *ten* large potatoes, one small Swedish turnip, one carrot, two parsneps, (an onion and a few stalks of celery,) with two or three spoonfuls of rice; boil half an hour, or until tender. Before serving, add a spoonful or two of wheat flour stirred up with cold water. One or two spoonfuls of sweet cream greatly improves the flavor.



THE SOLDIER'S RETURN.

(Prepared and engraved expressly for the American Agriculturist.)

The Editor with his Young Readers.

Scenes like this in the picture, are now common in all parts of the loyal states. Youtsee the soldier has been wounded in the leg, and is now on furlough recovered that he can walk with his crutch. He is a sergeant in his regiment, and has got home to his family, where he is explaining to his parents, and to his wife and children, the scenes of the battle. The newspaper map is spread out upon the table, and with the stem of his pipe, he is showing "how fields were won." You see by the picture of General Scott up on the wall, and the cannon that little Robie is drawing upon the floor, that military education has been going on in the family during the father's absence. There stands a future soldier of the Republic. How he drinks in every word of his father's story, and enters into his sympathies! Will he not always love the dear old flag under which his father fought, and his heart thrill to the music of the Star Spangled Banner? What seeds of patriotism and hatred to treason are now being sown in young hearts all over the land! The wife is well pleased to see the head of the household home again, though he comes bearing the wounds of battle—scars that he must carry with him to his grave. She is proud to have borne a part in the sacrifices, by which the land of their fathers, or of their adoption, has been rescued from its perils.

One of the good things to come out of this war is the cementing of the nation into one homogeneous people. The miserable jealousy towards foreigners will be cured. Almost every European nationality is represented in our armies, and their blood has been poured out as freely as that of the older citizens of the Republic. All have stood together in the presence of a common danger, and have been made children of a common country, by a baptism of blood. The seal can never be effaced, and will never be forgotten.

Alas! for the homes to whom the soldier will never return. For them there is no tale of triumph for the fly they love, but loneliness and grief, for which there is no solace but in God, and in exalted patriotism.

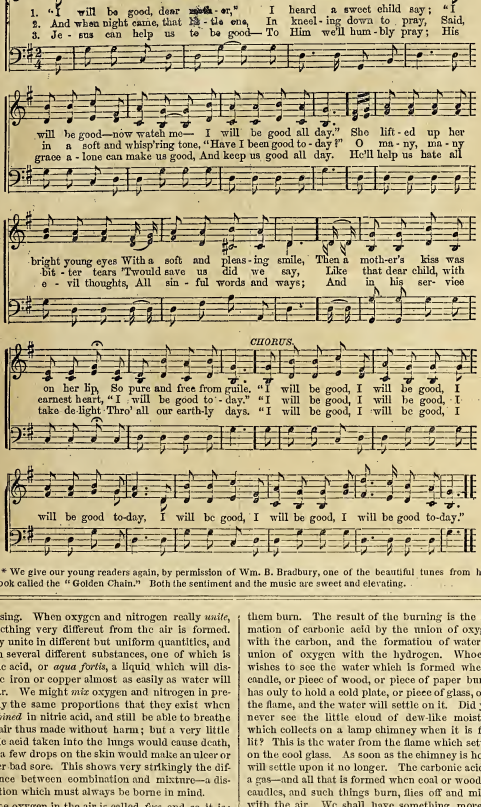
Something About Chemistry—III.

(Continued from page 184.)

Our young readers will remember that we told them, on page 183, about *Water*, that it was composed of two gaseous or air-like elements, oxygen and hydrogen; about the *Air*, which is a mixture of oxygen and nitrogen, chiefly; about the gas called *Carbonic acid*, which is formed when charcoal, or any thing which contains carbon, is burned in the air or in oxygen, and a little about Ammonia, composed of nitrogen and hydrogen. Now these substances, except the air, are compound bodies, the elements of which are united by *chemical affinity*. Affinity means the power which unites elements or compound bodies, so that two unlike substances form a new one unlike themselves, and in doing so, always combine in the same proportions. Thus when oxygen and hydrogen combine to form water, 8 parts (that may be 8 ounces, or 8 pounds, or any weight,) of oxygen unite with 1 part of hydrogen. When oxygen and carbon unite to form carbonic acid, 8 parts of oxygen unite with 12 parts of carbon, and so on. This is very different from mixing things together. We may mix salt and mustard, and oil and vinegar, and they make a salad dressing; but we know that each of the ingredients is still unchanged, for we taste each one in the mixture. In mixtures there may be more or less of either of the things mixed; but when things *unite* chemically, it requires a certain definite quantity of each. We told you that oxygen combined with iron, and formed iron rust, or oxide of iron Now in iron rust we perceive no oxygen, neither do we perceive any iron. 16 parts of iron united with 8 parts of oxygen; both the iron and the oxygen have disappeared, and we have red iron-rust, a new substance in all its relations. So it is with all chemical combinations, and this is the difference between mixed substances and compound bodies, whether they be solid, liquid, or gaseous.

The air, we have said, is composed of about one-fifth oxygen, and four-fifths nitrogen. This is a mixture, and the nitrogen softens the oxygen just as oil softens the vinegar and mustard in the salad

26—*Two to each Measure.* **I WILL BE GOOD, DEAR MOTHER.***



* We give our young readers again, by permission of Wm. B. Bradbury, one of the beautiful tunes from his book called the "Golden Chain." Both the sentiment and the music are sweet and elevating.

dressing. When oxygen and nitrogen really *unite*, something very different from the air is formed. They unite in different but uniform quantities, and form several different substances, one of which is nitric acid, or *aqua fortis*, a liquid which will dissolve iron or copper almost as easily as water will sugar. We might *mix* oxygen and nitrogen in precisely the same proportions that they exist when *combined* in nitric acid, and still be able to breathe the air thus made without harm; but a very little nitric acid taken into the lungs would cause death, and a few drops on the skin would make an ulcer or other bad sore. This shows very strikingly the difference between combination and mixture—a distinction which must always be borne in mind.

The oxygen in the air is called *free*, and so it is; that in water, and in iron-rust, and in carbonic acid, is *combined*, that is, united with other elements. When it is free, it enters into combination with other things generally, more easily than if it is in any combination. Now oxygen is the most abundant element; it is everywhere in the world—in the air, in the water, in the solid rocks, and in the soil. It is everywhere in a state of combination, except in the air, and will combine with every other element. Our own bodies, and those of the animals, and all plants, consist in great part of oxygen. It is therefore the most important, and is certainly the most interesting of all the elements. Wood, coal, tallow, oil, and all such things that we usually see burning, contain carbon, and all except anthracite coal and charcoal contain hydrogen also.

When any of these things burn, they combine with oxygen, and it is this very thing that makes them burn. The result of the burning is the formation of carbonic acid by the union of oxygen with the carbon, and the formation of water by union of oxygen with the hydrogen. Whoever wishes to see the water which is formed when a candle, or piece of wood, or piece of paper burns, has only to hold a cold plate, or piece of glass, over the flame, and the water will settle on it. Did you never see the little cloud of dew-like moisture which collects on a lamp chimney when it is first lit? This is the water from the flame which settles on the cool glass. As soon as the chimney is hot it will settle upon it no longer. The carbonic acid is a gas—and all that is formed when coal or wood, or candles, and such things burn, flies off and mixes with the air. We shall have something more to tell you next month about this carbonic acid gas.

The Tiger Lily and the Violet.

A correspondent of the *Agriculturist* sends the following story with a moral, to our young readers: "In the same bed with the lowly violets, and the modest lily of the valley, there grew a *Tiger Lily*, tall, showy, and soaring over these, as if despising them and glorying in its own large leaves and orange-colored spotted flowers. Some girls would notice *it* first of all, and say, "Isn't that handsome?" "Why no," Lizzy would answer, "I think the tiger lily is coarse and gaudy. I never put it in a bouquet." Her mother was pleased with her choice, and drew a lesson from it something like the following: The lily of the valley and the violets are emblems of *modest beauty*, (they always have been, as I could show from the best poets,) charming every beholder all the more because they are so unpretending, almost trying to hide away from gazing eyes. Genuine modesty is always beautiful; and its retiring manner never fails to be admired by the true and the good. "When unadorn'd, adorn'd the most."

The tiger lily may represent those who are pleased with vain display, and who fail to gain the admiration they court. Flaunting colors are very offensive to good taste; they indicate such qualities of mind as a correct judgment would never admire. The aspiring lily towered above the garden fence; a gust of wind broke off the stalk, and there it hung for weeks, an unsightly emblem of fallen pride. The violets and the lily of the valley nestled safely at its root, while the storms rolled harmlessly over them. (See Matt. 23: 12.) M.

Anagrams.

An Anagram is a certain transposition in the letters of any word or phrase, so as to make another phrase or word of pointed significance. They are sometimes quite interesting, and much amusement may be had in forming them. The following were received some time since:

Equestrianism—Quite near, Miss—[A very appropriate speech for a lady's companion in a horseback ride.]

Intemperate—Repeat "I ment." [Ah! yes; every intemperate man *ment* well enough.]

Degradation—To dread gain.

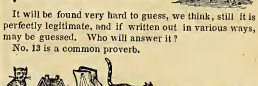
Incorrigibleness—Crinoline begs, Sir.

These from Miss MARY USHER.

Egotism—Miles go. *Atheist*—It hates. *Nectarines*—In ten acres. From RUFUS W. WEERS.

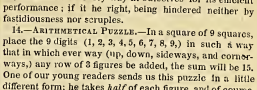
For the Guessers.

Rebusses.—We have here two Rebusses; one of them, No. 12, is a moral sentiment.



It will be found very hard to guess, we think, still it is perfectly legitimate, and if written out in various ways, may be guessed. Who will answer it?

No. 13 is a common proverb.



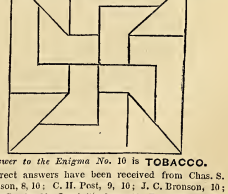
We think this will be found as easy to guess, as the other is hard. It conveys the lesson that, in whatever we do, we should in every way fit ourselves for its efficient performance; if it be right, being hindered neither by fastidiousness nor scruples.

14.—ARITHMETICAL PUZZLE.—In a square of 9 squares, place the 9 digits (1, 2, 3, 4, 5, 6, 7, 8, 9,) in such a way that in which ever way (up, down, sideways, and corner-ways,) any row of 3 figures be added, the sum will be 15. One of our young readers sends us this puzzle in a little different form; he takes *half* of each figure, and of course, the sum of each row is 7½ instead of 15. This, he thinks, entitles it to be called an "original" puzzle, but he is mistaken. The puzzle is an old one to the older boys and girls, though it is doubtless new to the "little shavers."

Answers to Problems.

Answer to the Rebus No. 8 is founded upon the text in Gal. vi: 7: "Whatsoever a man soweth that shall he also reap"—but it properly reads: What a man soweth that he reapeth.

Answer to the Block Puzzle No. 9 is given in the following cut. A somewhat different arrangement is admissable.



Answer to the Enigma No. 10 is **TOBACCO.**

Correct answers have been received from Chas. S. Stimpson, 8, 10; C. H. Post, 9, 10; J. C. Bronson, 10; Oliver Combs, 10; Jacob Stephens, 10; B. C. Atwood, 8; G. F. Sly, 8, 10; Abigail E. Downes, 9; J. H. Goodrich, 10.

Market Review, Prices, etc.

AMERICAN AGRICULTURIST OFFICE,
NEW-YORK, Friday Morning, June 20, 1862.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
23 days *this* m'th	594,000	1,290,000	1,920,000	45,000	110,000	475,000
25 days *last* m'th	571,000	518,000	320,000	55,000	100,000	176,000
SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	
23 days *this* month	697,700	2,337,000	2,912,000	187,500	31,000	
25 days *last* month	411,000	695,000	1,290,000	134,000	89,000	

2. *Comparison with same time last year.*

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
23 days 1862	594,000	1,290,000	1,920,000	45,000	110,000	475,000
24 days 1861	376,000	3,370,000	3,470,000	64,000	69,000	553,000
SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	
23 days 1862	697,700	2,337,000	2,912,000	187,500	31,000	
24 days 1861	386,500	3,370,000	3,304,000	70,000	69,000	

3. *Exports from New-York, from Jan. 1 to June 18.*

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862	1,351,118	5,012,421	5,046,835	760,166	2,131	20,857
1861	1,075,256	7,210,903	4,060,284	31,342	1,000	26,533
1860	397,358	861,624	1,167,375	100	8,380	93,164

4. RECEIPTS AT CHICAGO, JAN. 1, to JUNE 9.

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862	573,706	3,226,143	5,762,469	384,344	402,387	732,821
1861	599,806	5,361,999	6,862,153	152,659	289,969	967,353
1860	391,270	1,581,193	5,960,000	39,000	134,656	586,981

5. *Stock in store at Chicago, June 14.*

	Flour.	*Wheat.*	*Corn.*	*Oats.*
1862	56,187	1,168,048	2,098,464	474,614
1861	33,350	742,023	2,931,075	

6. RECEIPTS AT MILWAUKEE, JAN. 1, TO JUNE 9.

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862	276,964	1,330,858	104,464	66,456	31,699	122,535
1861	178,847	3,261,460	35,306	30,659	27,595	26,382

The foregoing tables exhibit the movements in Breadstuffs, both in New-York and the principal markets of the interior, so clearly as to call for no further explanation of that feature of the business.... The trade of the month in New-York has been on an extensive scale, the export demand for Flour and Grain having been active, though at lower prices. Recent intelligence from England was less encouraging, in reference to the prospects of the growing crops, especially of Wheat. Hence, export buyers have been more eager to purchase, and though some changes in the value of Flour have been unfavorable to sellers, there has been a noticeable improvement in prices of most kinds of Grain, particularly of Corn, and, sales, able for shipment. Within a few days receipts have been quite light, and the tendency of the market has been upward, though the extreme firmness in freights has operated as a check on this movement. The inquiry from the regular home trade is fair. There is an entire absence of speculation, which is generally regarded as a most gratifying symptom. While the news from Western Europe speaks gloomily of crop prospects, advices from most parts of our own country are very encouraging, and this circumstance indicates that on our own continent the fears of Great Britain and France will have to draw freely for a supply of cheap food, for another year, in order to make good the probable deficiencies in their own supplies. Altogether, this month closes quite cheeringly for our agriculturists, much more so, indeed, than was anticipated at its commencement, and we congratulate our readers on the very agreeable change.... A further important rise has taken place in Cotton, which has been in good demand throughout the month..... Provisions have arrived quite freely and have declined, with a moderate inquiry ..... HAY, Hops and Tobacco, have been in fair request at somewhat quotations ..... Seeds have moderately dealt in at uniform rates ..... Wool has been in more demand and prices have favored sellers. The new clip is now arriving rather freely at various points in the interior, and is bringing very full prices, when in good order and properly packed. Wool put up for market should be tagged and well tied up with twine of medium size, but not too coarse. In packing Wool for market, put it in bags such as are in use for sale in the city, the tare of which will be observed as three pounds. Such sacks are worth to the purchaser of wool nearly their cost for the purpose of re-sacking, whereas sheeting sacks, which are more commonly used, are worthless to re-sack in, and sheders will allow nothing for them. When there is an unusual number of buck fleeces in lots of Wool, dealers observe the same rules as to unwashed, viz.—one third off..... The Secretary of the Vermont Agricultural Society, Daniel Needham, in his annual report, states that, "reasoning from analogy, the price of wool during the next few years must be high,"—basing his views on the opinion that the cotton crop will not be planted as extensively as has been for some years past; and that the million of soldiers in the field will wear a third more clothing than they would in peaceful avocations.... The transactions in other agricultural products have been on a moderate scale. The table of prices show the changes and the present rates.

CURRENT WHOLESALE PRICES.

	May 19.		June 20.	
FLOUR—Superfine to Extra State	$4 35	@ 4 85	$4 10	@ 4 75
Superfine Western	4 35	@ 4 85	4 10	@ 4 75
Extra Western	4 50	@ 5 75	4 60	@ 5 75
Fancy to Extra Genesee	5 00	@ 5 75	4 90	@ 5 75
Super. to Extra Southern	4 85	@ 6 75	4 15	@ 6 75
RYE FLOUR—Fine and Super.	3 10	@ 4 75	2 90	@ 4 75
CORN MEAL	2 90	@ 3 20	2 90	@ 3 20
WHEAT—Canada White	1 23	@ 1 37	1 15	@ 1 35
Western White	1 22	@ 1 37	1 15	@ 1 35
All Kinds of Red	1 20	@ 1 35	1 05	@ 1 32
CORN—Yellow	54	@ 56	55	@ 57
White	Nominal.		55	@ 56
Mixed	49	@ 51½	48	@ 50
OATS—Western	39	@ 41	40	@ 44½
State	41	@ 42	44½	@ 45
RYE	75	@ 76	62	@ 65
BARLEY	65	@ 68	65	@ 75
HAY, in bales, per 100 lbs	65	@ 80	60	@ 75
COTTON—Middlings, per lb	27	@ 27½	31	@ 31½
Rice, per 100 lbs	6 50	@ 7 50	6 50	@ 7 50
Bags, for cash, per lb	13½	@ 14	14	@ 14½
FEATHERS, Live Geese, p. lb	34	@ 38	38	@ 42
SEED—Clover, per lb	Nominal.		8	@ 9½
Timothy, per bushel	1 50	@ 1 75	1 75	@ 2 00
FLAX, per lb	6½	@ 6½	6½	@ 8½
MOLASSES, New-Orleans, p.gl.	40	@ 45	40	@ 45
COFFEE, Rio, per lb	19	@ 20	19	@ 21½
TOBACCO—Kentucky, & c.p.lb.	7	@ 18	7½	@ 18
Seed Leaf, per lb	8	@ 50	7	@ 50
WOOL—Domestic fleece, p.lb.	38	@ 53	46	@ 52
Domestic, pulled, per lb	51	@ 46	54	@ 54
TALLOW, per lb	8½	@ 9	8½	@ 9
OIL CAKE, per ton	33 00	@ 37 00	28 00	@ 35 00
PORK—Mess, per bbl	12 37½	@ 12 50	11 00	@ 11 00
Prime, per bbl	9 75	@ 10 00	8 62½	@ 8 75
BEEF—Prime, per bbl	12 50	@ 13 00	11 12½	@ 13 00
LARD, in bbls., per lb	7½	@ 8½	7½	@ 8½
BUTTER—Western, per lb	11	@ 17	11	@ 17
State, per lb	10	@ 17	10	@ 18
CHEESE	6	@ 8½	6	@ 7
Broom Corn—per lb	5	@ 7	5	@ 7

EGGS—Fresh, per dozen	8	@ 10	9 @ 11
POULTRY—Fowls, per lb	9	@ 10	10 @ 11
Ducks, per pair	50	@ 75	50 @ 62
Geese, per pair	1 25	@ 1 50	1 00 @ 1 25
Turkeys, per lb	9	@ 10	9 @ 10
Dried Apples, per lb	5	@ 6	5 @ 5½
Dried Peaches, per lb, peeled	20	@ 25	20 @ 25
Dried Huckleberries, per lb	16	@ 17	16 @ 17
POTATOES—Northern, p. bbl	1 75	@ 2 50	1 75 @ 2 50
Peachblows, per bbl	1 88	@ 2 13	1 88 @ 2 13
Sweet Potatoes, per bbl	3	@ 00	3 @ 00
Bermuda—New, per bbl	5 25	@ 6	5 25 @ 6 75
ONIONS—New, per bbl, p. lb			2½ @ 2½
TURNIPS—New White, per bbl			1 75 @ 3 00
ASPARAGUS, per doz. bunch	1 00	@ 2 00	1 00 @ 1 50
LETTUCE, per dozen	25	@ 37	18 @ 25
RADISHES, per 100 bunches	50	@ 1 00	50 @ 75
STRAWBERRIES, per basket			12½ @ 50
" Wilsons, per pint			3 @ 6
CHERRIES, per lb			10 @ 15
GOOSEBERRIES, per bushel			1 00 @ 1 25
CHERRY PEACHES, per basket			50 @ 75

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been well-supplied, the past month, the average receipts being 4,246 per week, or 200 less than the previous month. Prices have fluctuated somewhat, advancing 3c. May 20th, when 3,400 were on sale, and declining as much on the following week, when 5,366 beeves offered, again advancing ½c. with a light supply, remaining stationary the next week, and falling back ½c. at the last market, June 17th, when near 4,000 head were in market. The extra fat cattle sold at 8¾c.@9c. good fat steers 8½c., fair quality, 8c., and poor 7c.@7½c. Average of all sales 8c., and none left over.

Veal Calves.—Receipts are falling off rapidly, averaging only 760 per week since last report. They are ¼c. per lb. higher, the best bringing 6½c., fair veals 5c., and common 4c.@4½c. They sell readily.

Sheep and Lambs.—These are more abundant than last month, and sell briskly at former rates, or 4c.@4½c. 9 lb. live weight for fair to good sheep; 5c. for those extra fine. Lambs are plenty, selling at 7c.@7½c. per lb. live weight, or at an average of $4@$4½ per head. Receipts of both have averaged 7,722 per week.

Live Hogs.—Receipts are falling off with the advance of Summer. We have had but 9,951 per week since last writing, which are more than the demand warrants, and prices have continued to decline during the month, with some hogs left unsold each week. They are now worth 6c. for fair, 6½c. if corn fed, and 7c. for fat.

The Weather, during the past month has been variable, and the average temperature lower than usual at this season. The drouth prevailing when we closed our last number Fr. M., rain at night—12, clear, fine—13, hot, (86°) showers P. M.—14, clear, fine, N. E. rain storm at night—15, cloudy A. M., clear P. M.—16, 17, clear—18, cloudy—19, rain at night—20, clear, warm.

Rain Fall,—From the 15th of May, to the 15th of June, there were 8.86 inches of rain, which fell at 11 different times. The great rain of the 6th and 5th was much more coincidental in this vicinity, 5 1-5th inches falling in 24 hours.

Reports on Crops, June 10, 1862.

(*See General Remarks and Reports on Special Crops on page* 200, *and Notes to Crop Reporters on page* 197.)

EXPLANATIONS TO THE READER. (Full details are given on the Blank Forms furnished to Reporters.)

The First Column gives the Counties from which the reports come. In many cases the territory reported upon extends over adjacent counties, and the figures apply to a larger territory than the county named, but sometimes to single townships only.

The Second Column gives the number of persons in each county, the average of whose opinions are embraced in the single rows of figures, standing opposite in the same line. In several cases a whole County is represented by an officer of the Agricultural Society, who gives the summary of reports from assistants in each of the towns, as indicates that a large but indefinite number of persons joined in making the report.

The Third Column gives the names of the persons who received and distributed blanks, and collected and forwarded returns.

☞ *In all the reports the numeral* **10** *is taken as the standard for comparison,* thus:

Column A—10 means that the weather for a month previous to the date of the report was about as good as the average for other years, that is for growing crops and for general farm operations. Figures above or below **10** indicate the comparative propitiousness or unfavorableness of the weather.

Columns—B—E—H—In these **10** indicates that the amount of surface growing is about the same as *last year*. Each figure (or unit) above **10** means a tenth more of surface, and each unit below **10**, means one-tenth less. Thus, 5 means one-half of average surface—15 means one and a half—20 means double, and so on.

Columns C—F—I—N—P—S—In these columns **10** means that the average surface sown or planted or growing is about the same as the average for five years past. Each unit above or below **10** stands for an increase or decrease of one-tenth in the surface.

Columns D—G—K—M—O—R—T—U—V—In these columns **10** means that the *condition* and *prospect* on June 10th indicated an *average yield per acre*. Here also each unit above or below ten indicates the prospect of a yield a tenth above or a tenth below the average; thus, a half crop is indicated by 5—a double crop by **20**. Some report fruit prospects at **100** to **300**, meaning that the promise is for ten to thirty times the average.

Blanks left in a column indicate that little or none of the crop is grown, or that it is too early to report upon it, or that the reporter could not estimate satisfactorily to himself. No reports have been received from some whose names are in the list, and who furnished reports last month.—For comments and reports of other crops see page 200.

Registered No.	*County and number of persons reporting, from each.*	*Persons gathering and sending the reports.*	*Winter Spring Wheat*	*Corn.*	*Rye.*	*Oat.*	*Hay.*	*Pota-toes.*	*Fruit.*
			Surface as, 1861. / Surface as, 1862. / Prospect as of date.	*Surface as, 1861. / Surface as, 1862. / Prospect as of date.*	*Surface as, 1861. / Surface as, 1862. / Prospect as of date.*	*Surface as, 1861. / Surface as, 1862. / Prospect as of date.*	*Surface as, 1861. / Surface as, 1862. / Prospect as of date.*	*Surface as, 1861. / Surface as, 1862. / Prospect as of date.*	*Apples. / Peaches.*
	OHIO.		A B C	D E F	G H I	K L M	N O P	R S T	U V
1	Washington	A. J. Hart	10 12 10	10 12 9	10 12 10	10 10 15	8 10 15	12	
2	Angl'aise	Samuel Crake	10 12 10	10 12 10	10 12 10	10 10 10	10 10 10	10	
3	Miami	Enoch Jones	11 11 12	10 11 10	10 10 7	9 10 10	10 8 15	20	
4	Trumbull	L. P. Andrews	10 12 10	10 12 10	10 10 10	10 10 10	10 10 10	20	
5	Huron	C. B. Simmons	9 11 11	10 11 9	10 10 9	10 10 10	10 10 10	25	
6	Crawford	Robertson	10 11 10	10 11 10	10 10 10	10 10 10	10 10 10	25	
7	Ashtabula	A. W. Kennedy	15 15 20	10 15 15	12 15 12	10 15 20	15 10 8	10 15 20	20 20
8	Licking	A. W. Penny	10 12 10	10 12 10	10 10 10	10 10 10	10 10 10	20	
9	Portage	H. G. Spooner							
10	Stark	Samuel Roth	11 12 10	15 20 10	11 10 10	9	9 11 10	12 11 9	15 20
11	Paulding	J. N. Goodin	10 12 15		8 8 10		5 7 15	12 10 8	15 20
12	Jackson	D. Mackley	10 12 10	10 12 10	10 10 10	10 10 10	10 10 10	10 10 10	20 20
13	Richland	Joel Myers	10 12 10	10 12 10	10 10 10	10 10 10	10 8 9	10 11 10	20 20
14	Fairfield	Thomas Cole	10 12 13		10 12		10 12	10 12	20 20
15	Wyandot	J. D. Sears	10 12 10	10 12 10	10 10 10	10 12 8	10 12 8	10 12 13	8 20
16	Portage	Homer Mills							
17	Ashland	M. Bright	9 12 14	12 14 11	10 12 10	9	9 10 10	10 10 10	15 20
18	Wayne	J. A. Brown	10 12 14	10 15		12 14 11	9	10 9 10	10 10 10	20 25
19	Coshocton	B. Burt	10 12 10	10 12 10	10 10 10	10 10 10	10 10 10	10 12 10	10 12
20	Tuscarawas	A. O. Mikesh	10 12 13	10 12 10	10 10 10	10 10 10	10 10 10	10 15 12	15 20
21	Erie	Sam'l Hubbell	10 12 10	10 12 10	10 10 10	10 10 10	10 10 10	10 12 10	20 20
22	Washington	S. C. Hayward	10 10 6	20	8 10 10		9 10 10	8 10 10	20
23	Morgan	Wm. Milhoun	10 10 10	5 6 8	10 10 10	10 10 10	10 10 10	10 10 10	20
24	Jefferson	John Edwards	10 12 10	10 12 10	10 10 10	10 10 10	10 8 12	8 10 10	10 20
25	Portage	A. S. Plummer	10 12 10	10 12 10	10 10 10	10 10 10	10 10 12	12 11 10	15 20
26	Morrow	S. W. Hiskett	10 10 14	11 15 20	12 13 12	10 14 10	12 12 12	15 10 24	15 100
27	Ashtabula	S. C. Calkins	10 10 10	10 10 10	10 10 10	10 10 10	10 10 10	10 10 10	20 20
28	Belmont	Edd McCune	10 12 10	10 12 14	9	10 12 10	9	9 10 10	6 10 10	20
29	Belmont	Slater Townsend	10 12 10	10 12 10	10 10 10	10 10 10	10 10 10	10 10 10	10 10 10	20
30	Butler	Isaac Youmans	8 12 13	10 10 15	8 8 12	10 15	7 10 10	15 6 15	10 10
31	Greene	S. Clay Cox	10 12 10	10 12 10	10 10 10	10 10 10	10 10 10	10 10 10	20 20
32	Licking & Fr'k	James Strawn	12 12 11	15 20 10	9 11 10	12 15 12	8 10 10	10 10 10	20 20
33	Richland	H. S. McFarland	10 12 10	14	13 14 12	10 14 10	8 10 14	10 12 8	15 20
34	Fayette	H. Hays	10 12 10	10 12 10	10 10 10	10 10 10	10 10 10	10 10 10	20 20
35	Miami	B. F. Brown	10 12 10	10 12 10	9 10 10	9 10 10	9 10 10	7 10 10	10 12
36	Butler	John M. Millikin	12 12 12	12 12 12	10 10 10	12 14 10	14 14 10	10 12 12	20 20

Reg	County.	No.	Chief Reporters.	Wr	Wint'r Wheat			Spring Wheat			Corn.			Rye.		Oat.		Hay		Potatos		Fruit Ap	Ph
				A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	R	S	T	U	V
	INDIANA.																						
51	Benton	7	D. Campbell	10	14	30	15	10	3	12	7	7	14	8	12	4	10	15	13	10	10	12	..
52	Jay	1	Peter Walter	15	11	15	14	..	..	..	11	15	12	5	8	10	12	12	15	10	10	12	999
53	Hendricks	7	A. Whitenack	8	11	16	11	..	..	..	9	10	10	..	..	10	8	11	12	..	..	14	11
54	Knox	4	Joel Wampler	6	12	13	11	..	..	..	9	8	7	10	10	5	5	10	10	9	8	10	4
55	Randolph	16	C. G. Puckett	10	10	13	15	..	..	..	10	10	10	..	..	10	9	10	12	10	9	18	30
56	Henry	18	T. B. Redding	15	12	15	15	..	..	..	10	12	12	..	..	5	10	12	12	10	10	14	15
57	Henry	5	Jehu Allen	10	12	14	13	..	..	..	12	13	10	..	..	9	10	10	15	10	8	10	12
58	Sullivan	m	Murray Briggs	9	11	13	10	..	..	..	10	12	10	11	12	8	12	12	11	..	..	12	13
59	Hendricks	1	Jacob Bader	9	10	12	8	..	..	..	11	15	10	..	..	6	8	12	12	10	10	10	10
60	Marshall	1	Fred. Hoover	10	13	15	8	..	..	..	12	15	8	..	..	10	8	10	8	10	10	15	100
61	Ripley	1	E. Saltmarsh	8	11	12	12	..	..	..	10	10	8	10	10	8	8	10	12	10	..	10	4
62	Henry	..	P. P. Prifner	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
63	Vermillion	4	S. Grondyke	7	12	15	9	..	..	..	8	8	10	12	20	6	7	12	20	..	..	16	10
64	Hendricks	1	A. Furnas	10	10	11	14	..	..	..	10	10	12	12	10	8	6	10	12	8	10	15	6
65	Ripley	..	John Bennett	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
66	Newton	11	Elam G. Smith	12	15	20	8	10	15	9	15	14	10	13	12	20	18	10	15	12	14	20	6
67	Grant	8	Wm. Thomas, jr.	11	11	15	25	..	..	..	12	13	15	..	..	10	12	12	20	13	10	15	30
68	Switzerland	1	W. H. Stow	10	12	14	15	..	..	..	8	9	10	10	12	7	8	10	10	8	8	20	15
69	Green	1	Wm. Hovis	8	10	12	12	..	..	..	10	11	9	13	12	9	10	12	10	11	10	8	15
70	Adams	5	P. N. Collins	15	12	14	11	..	..	..	8	12	10	..	..	8	10	10	10	10	12	20	50
71	Adams	5	John McConnel	12	15	20	15	..	..	..	12	15	10	10	10	12	12	20	20	10	10	30	100
72	Ripley	3	John Bennett	9	12	13	12	..	..	..	9	10	10	12	10	8	10	13	10	10	10	13	15
73	Elkhart	1	D. S. Kershner	8	12	15	5	2	1	11	10	12	8	10	5	8	10	15	8	11	10	1	..
74	Rush	1	S. M. Ball	12	9	10	12	..	..	..	11	9	12	..	..	8	9	12	13	10	12	15	20
75	La Porte	1	John Sutherland	6	12	15	9	12	10	10	6	5	9	..	..	5	8	12	10	10	..	8	6
76	Warwick	1	John J. Fleming	10	13	14	12	..	..	..	10	5	12	..	..	..	..	10	10	10	10	10	12
77	Johnson	21	Hurricane F's As'	12	12	0	14	..	..	..	9	9	9	10	10	7	6	12	15	10	10	20	12
78	Jay	11	W. J. Hesser	11	12	14	10	..	..	..	10	12	9	7	10	8	7	12	10	10	9	10	12
79	Decatur	1	John W. Smith	7	12	10	15	..	..	..	10	11	9	..	..	5	7	8	12	10	10	10	..
80	Vermillion	8	John Davis	10	10	12	5	10	..	..	10	12	10	15	10	8	10	15	5	20	10	8	5
81	Morgan	1	C. S. Hilbourn	15	12	..	11	12	..	15	15	15	10	12	10	11	10	10	12	12	15	10	4
82	Vigo	m	James M. Lyons	10	12	15	13	..	..	..	10	12	10	10	10	15	12	12	10	10	10	10	12
83	Randolph	9	L. M. Reeves	..	12	13	15	..	..	..	12	12	10	9	10	7	9	12	12	15	10	20	30
84	Hamilton	1	Andrew F. Evans	10	10	13	11	..	..	..	13	13	9	..	..	8	10	12	13	10	10	10	15
	ILLINOIS.																						
101	McDonough	..	Nelson Abbott	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
102	Coles	..	C. Boles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
103	Saline	16	James M. Eaton	10	11	15	10	..	..	..	11	12	10	10	10	13	12	20	12	12	10	15	20
104	Jersey	1	J. M. Bacon	8	10	10	12	.	..	..	10	10	8	..	..	3	7	12	12	..	10	7	10
105	Jasper	1	Henry Griffing	7	15	15	12	..	..	..	10	13	8	12	12	8	8	10	15	10	10	10	10
106	Pike	1	Thos. Odiorne	10	12	10	7	5	8	5	9	9	8	..	..	..	..	10	10	10	10	10	10
107	Vermilion	7	H. C. Smith	12	12	10	13	7	7	8	10	12	10	..	..	8	8	10	14	10	10	15	10
108	Richland	1	H. A. Hunt	8	13	25	10	..	..	..	10	15	..	..	..	10	8	20	10	15	..	8	5
109	St. Clair	1	Edw. Flanagan	9	12	15	25	..	..	..	8	6	5	:	..	5	4	20	10	8	15	5	8
110	Marion	..	E. L. Merritt	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
111	DeKalb	1	C. W. Branch	7	10	10	12	12	12	8	7	9	5	..	..	10	10	10	13	..	10	10	..
112	Macoupin	5	Harry Grundy	11	13	12	20	5	5	7	9	9	10	..	..	3	9	14	12	..	..	10	15
113	Cumberland	..	J. E. Mumford	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
114	Putn'm& Mar'll	1	C. C. Hoagland	10	8	8	10	10	10	10	12	10	10	5	10	15	12	10	15	10	12	10	..
115	Woodford	1	James Freeman	8	10	9	5	8	9	8	9	9	8	10	8	9	8	12	8	10	6	8	..
116	Ogle	21	John Sharp	8	20	25	15	10	15	3	10	15	8	10	12	12	12	15	20	..	15	20	20
117	Vermillion	8	William Bowman	10	12	13	10	..	..	..	8	10	10	13	13	8	10	12	10	10	10	15	50
118	Kankakee	1	Democrat Office	8	10	12	10	10	14	12	..	16	15	..	..	10	10	12	14	..	..	12	16
119	Kendall	4	H. S. Hills	7	7	3	8	15	30	10	7	10	8	..	..	7	10	13	10	10	10	13	..
120	Crawford	1	Erastus Logan	12	15	20	20	..	..	..	8	10	15	30	20	10	15	15	15	12	10	5	5
121	Douglass	1	Caleb Bates	10	12	15	15	10	10	10	9	12	8	10	12	10	9	12	12	10	10	8	7
122	Mason	1	J. B. Wright	10	8	7	5	8	5	5	10	8	8	8	8	8	10	15	15	10	10	15	15
123	Douglass	1	I. J. Halsted	7	10	8	6	..	..	..	10	12	8	10	10	12	10	15	12	12	..	12	10
124	Warren	1	A. H. Tracy	10	11	10	11	11	11	10	9	9	8	7	10	10	10	11	10	10	10	..	..
125	Mason	1	R. S. Lybarger	10	10	5	..	15	10	10	10	9	10	7	10	10	9	..	..	..	..	8	10
	WIS.																						
151	Sauk	1	Abijah Sweet	10	10	20	10	20	60	10	10	20	10	..	..	20	10	10	10	40	10	10	..
152	Dodge	1	D. L. Bancroft	10	..	..	..	10	15	..	10	8	7	..	..	10	9	12	11	..	..	15	..
153	Fond du Lac	12	E. Reynolds	8	..	..	..	11	14	10	10	8	5	..	..	9	8	13	15	10	8	12	..
154	Walworth	1	Geo. Cross	12	..	..	..	10	..	10	11	9	8	..	..	10	10	10	15	10	10	..	..
155	Green Lake	4	C. S. Whittier	10	..	..	..	11	10	10	10	9	7	..	..	9	10	12	9	10	9	8	..
156	Jackson	m	C. T. Gansel	12	8	10	12	11	20	12	12	10	10	..	..	8	10	..	..	12	10	..	..
157	Dane	4	I. A. Kierstead	13	..	..	..	10	12	9	10	11	5	[illegible]	12	10	10	14	13	10	10	10	..
158	Trempleau	1	F. W. Newland	9	20	15	12	13	15	10	20	16	9	..	..	10	10	12	10	15	10	12	..
159	Grant	5	J. A. Curtis	10	10	5	15	8	10	10	11	13	10	10	13	12	10	20	13	10	10	5	..
160	Adams	..	S. W. Pierce	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
161	Badax	..	J. A. Somerly	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
162	Fon du Lac	4	Rev. A. A. Horton	12	..	..	..	10	11	9	9	10	8	..	..	10	9	10	12	11	..	14	..
163	Monroe	21	G. M. Robinson	10	11	15	20	11	20	11	15	15	5	10	15	10	10	12	10	15	10	20	..
164	Ray	1	O. D. Hawkins	8	10	10	8	7	7	8	8	8	10	10	10	9	9	8	8	10	10	5	12
165	Brown	12	———	7	..	..	..	5	20	10	..	..	..	10	10	5	..	30	15	2	..	15	..
166	La Fayette	1	J. C. March	..	..	..	..	3	..	7	9	..	5	..	..	..	8	..	9	..	8	5	..
167	Grant	13	Thos. Pendleton	8	..	..	..	11	16	5	10	17	8	..	..	12	8	13	12	10	10	9	..
168	Grant	4	S. D. Watkins	8	10	4	10	12	13	8	11	14	8	..	..	12	10	15	13	10	9	..	..
169	Oconto	5	D. B. Newton	10	8	12	10	12	15	10	10	11	10	..	..	15	10	10	11	10	..	..	..
170	Brown	7	———	7	..	..	..	15	20	10	7	20	..	10	10	20	10	30	15	15	..	15	..
	IOWA.																						
201	Jackson	m	H. Stephens	12	..	..	..	12	9	3	13	20	10	..	..	10	10	20	12	10	10	..	..
202	Clinton	..	C. W. Hatch	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
203	Cedar	41	J. A. Macy	8	10	3	12	10	23	7	11	20	8	..	..	15	10	10	15	8	10	12	..
204	Fayette	1	H. C. Wood	10	..	..	..	11	..	12	10	..	8	..	..	9	10	..	..	..	..	..	..
205	Ringgold	1	I. S. Beall	8	10	15	15	10	15	10	10	15	8	15	12	15	10	..	10	20	10	10	10
206	Delaware	m	J. L. McCreery	9	13	10	14	14	17	7	11	13	12	..	..	8	8	8	8	..	..	14	..
207	Poweshiek	1	Erastus Snow	14	12	30	15	9	50	10	18	80	8	40	15	..	10	..	15	..	10	20	..
208	Marion	2	B. C. Bellamy	10	10	15	20	9	12	11	12	14	10	15	13	13	10	14	12	..	..	..	..
209	Cedar	21	J. C. Alexander	8	..	..	..	11	13	10	12	15	5	..	..	10	10	12	15	10	8	..	..
210	Madison	..	J. Carman	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
211	Scott	..	T. F. C. Schmidt	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
212	Buchanan	m	H. C. Heminway	10	..	..	..	11	12	11	10	12	10	9	13	11	10	10	10	12	10	..	..
213	Howard	1	C. A. Marshall	11	..	..	..	14	40	10	18	25	12	..	..	30	12	..	..	12	7	..	..
214	Lucas	6	M. Moorhead	12	..	..	..	9	13	10	13	15	11	..	..	12	11	..	..	9	11	..	..
215	Page	61	S. H. Kridelbaugh	9	11	20	10	11	99	10	10	70	10	10	11	40	11	9	10	50	11	10	10
216	Linn	3	F. H. Williams	5	..	..	..	11	13	..	11	13	..	..	..	10	10	..	..	10	10	..	..
217	Clayton	1	Wm. A. Penfield	9	..	..	..	12	20	15	12	20	10	..	..	15	10	10	18	15	..	..	..
218	Madison	3	Josiah Carmean	10	8	10	15	8	10	10	12	10	8	5	15	15	10	20	12	..	..	..	..
219	Scott	1	J. F. C. Schmidt	11	..	..	..	11	15	10	11	14	10	..	..	10	..	11	12	10	..	11	..
220	Wayne	20	J. S. Whittaker	..	11	12	9	9	8	8	9	8	9	11	10	9	8	10	11	8	10	..	..
221	Delaware	1	J. C. Skinner	9	12	15	10	13	17	8	10	15	9	12	10	9	9	15	10	12	10	12	..
222	Jones	m	Isaac Willard	9	..	..	..	11	12	7	11	12	11	10	10	9	9	12	12	9	9	12	8
223	Linn	3	H. C. Raymond	8	..	..	..	12	16	7	10	14	7	12	9	10	9	15	12	11	10	20	..
224	Dallas	9	H. E. Belden	9	..	..	..	9	12	12	11	13	10	..	..	13	10	12	13	10	11	11	11
	MINN.																						
251	Hennepin	1	Jonas H. Howe	12	..	..	..	11	18	8	15	10	10	3	10	15	10	..	..	10	10	..	..
252	Fillmore	7	A. Gould	15	10	..	16	12	20	16	13	15	10	11	13	12	10	10	12	10	12	..	..
253	Dodge	3	T. G. Patch	12	..	..	..	15	40	12	12	20	12	..	..	20	12	20	12	15	10	..	..
254	Olmstead	1	R. H. Talbot	11	..	..	..	13	25	11	13	20	10	10	10	20	10	..	10	20	10	..	..
255	Winona	21	S. R. Crittenden	8	13	20	21	11	15	12	12	9	9	7	9	15	12	12	8	13	9	10	9
256	Sibley	1	J. U. Green	9	..	..	..	15	35	10	18	30	8	8	15	20	12	..	..	25	5	..	..
257	Nicollet	5	Wm. H. Sigler	15	20	20	20	15	50	15	..	..	..	20	20	20	20	..	..	20	7	..	..
258	Fillmore	1	A. Hitchcock	..	..	..	..	14	30	11	12	20	8	..	..	20	10	..	..	..	..	..	..
259	Olmsted	1	A. Smith	10	..	..	..	11	15	10	12	14	10	10	10	13	10	10	10	12	10	12	15
260	Wabasha	1	Wm. McLeoud	8	..	..	..	15	20	8	10	12	10	..	..	14	8	13	8	13	10	..	..
261	Blue Earth	11	James Miller	12	..	..	..	15	40	12	8	5	10	20	10	30	10	..	..	10	..	..	..
	MO.																						
300	Maries	10	W. I. Meeder	8	9	10	7	11	15	6	10	12	8	10	9	9	4	10	8	11	10	10	8
301	Mississippi	1	Geo. Whitcomb	11	7	12	13	10	10	12	5	7	8	10	12	8	10	5	12	5	12	15	15
302	Franklin	1	Charles E. Ross	8	10	12	10	..	..	..	10	10	8	..	.	10	8	10	10	..	..	10	10
303	Greene	2	A. C. Graves	10	3	5	10	..	..	..	4	6	10	3	5	4	10	8	10	5	10	10	12
	KY.																						
326	Spencer	8	Milton McGrew	9	10	11	7	..	..	..	8	10	6	6	7	9	5	12	10	11	8	4	5
327	Adair	11	R. B. Dahoney	8	8	10	4	..	..	..	7	9	8	10	5	9	2	10	10	10	8	10	12
	MICH.																						
351	St. Joseph	6	O. W. Beall	5	10	10	5	..	..	..	10	10	9	..	..	10	10	11	10	11	10	10	20
352	Berrien	1	A. Bennett	10	10	12	10	..	..	..	12	10	12	..	..	8	10	10	10	10	10	3	2
353	Clinton	1	H. C. Hodge	8	12	20	10	10	15	10	12	15	10	..	..	15	10	15	8	15	10	12	12
354	Jackson	..	L. D. Watkins	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
355	Sanilac	16	C. Waterbury	6	20	30	7	5	8	8	..	..	..	10	10	15	8	15	7	10	5	10	..
356	Calhoun	6	C. M. Keep	8	10	12	9	..	..	..	10	11	9	..	..	10	9	12	9	9	10	9	50
357	Clinton	22	John Watling	5	20	40	25	15	40	10	10	50	10	10	15	12	10	50	15	20	..	20	15
358	Lenawee	11	Rufus Baker	8	11	11	5	..	..	..	10	10	8	..	..	10	10	10	10	[illegible]	..	10	50
359	Ionia	5	D. T. Lawrence	8	13	15	10	9	10	9	11	12	10	8	11	12	11	16	11	12	..	9	5
360	Washtenaw	11	A. Gillet	10	12	11	13	..	..	..	10	13	8	..	..	8	10	18	10	..	..	20	40
361	Ionia	7	Charles Goodrich	9	13	16	8	..	..	..	10	12	10	..	..	12	10	13	7	..	..	15	40
	N. Y.																						
401	Chautauqua	..	John J. Phelps	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
402	Orleans	11	Peter Ferris	6	12	23	8	10	17	7	8	8	7	..	..	8	6	10	6	10	7	11	14
403	Lewis	1	John F. Bates	7	..	..	..	9	10	6	..	..	..	..	..	10	6	10	6	10	..	..	..
404	Wyoming	11	Linus De Wolfe	8	15	8	15	12	10	12	10	10	10	..	..	10	10	10	7	8	10	20	50
405	St. Lawrence	m	J. S. Wallace	15	..	..	..	11	13	10	12	14	9	8	7	12	10	10	5	7	10	10	..
406	Delaware	1	Levi Miles	10	7	10	6	8	10	6	10	12	8	13	5	9	7	13	8	12	..	3	..
407	Niagara	1	J. Q. Adams	5	10	10	8	..	..	..	..	..	..	..	..	..	..	10	3	..	..	15	20
408	Suffolk	1	G. E. Woodruff	8	12	10	15	5	8	10	12	10	10	11	15	13	10	12	10	15	10	12	10
409	Fulton	..	Geo. W. Heaton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
410	Niagara	1	A. E. Raymond	8	15	40	10	7	15	6	12	10	8	..	..	10	8	8	9	15	9	8	30
411	Oswego	..	D. Farling	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
412	Chenango	4	H. T. Richmond	12	12	20	8	5	4	8	10	10	8	10	10	10	8	10	8	10	10	100	..
413	Otsego	4	H. T. Richmond	12	12	20	8	5	4	8	10	10	8	10	10	10	8	10	8	10	10	100	..
414	Wayne	..	A. M. Richardson	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
415	Cayuga	..	B. W. Thompson	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
416	Chautauqua	1	H. A. Whittemore	15	10	10	15	13	15	12	15	10	15	..	..	20	13	10	12	12	10	20	30
417	Ontario	9	E. A. McKay	10	13	20	13	8	5	12	12	12	10	7	10	10	12	12	13	12	10	13	20
418	Saratoga	13	J. C. Rouse	10	12	12	8	12	12	8	12	12	12	10	8	12	8	10	8	15	13	15	..
419	Onondaga	4	D. G. Newell	12	13	14	9	..	..	..	12	..	10	7	8	12	10	10	7	10	10	100	..
420	Queens	m	Farmer's Club	10	10	11	7	..	..	..	10	10	9	13	13	10	10	12	11	9	10	15	..
421	Essex	1	Jos. E. Smith	8	10	10	8	8	10	5	10	10	5	10	8	8	5	15	5	10	10	20	..
422	Suffolk	7	Watson Wilson	13	15	30	14	10	35	13	20	30	8	30	13	20	8	15	10	20	12	20	..
423	Wyoming	1	D. T. Griffin	8	7	8	13	8	10	8	..	..	..	..	..	10	8	11	9	9	..	11	..
424	Westchester	4	James Wood	9	10	10	12	10	10	15	11	12	9	10	15	10	14	10	13	10	10	20	25
425	Allegany	1	J. H. Weaver	9	..	..	..	9	..	11	7	..	10	..	..	10	10	11	9	10	..	20	..
426	Broome	1	Cephas Benedict	10	10	..	7	9	..	10	10	..	9	8	10	10	10	10	8	10	10	10	5
427	Suffolk	4	John Henderson	5	11	11	12	10	11	10	10	10	10	[illegible]	10	10	10	11	12	11	10	15	..
428	Allegany	26	Daniel H. Cobb	7	10	7	10	7	2	10	9	12	11	8	10	15	10	13	13	14	16	12	..
429	Broome	19	C. H. Treadwell	12	10	10	7	11	12	8	13	13	10	10	6	11	7	12	7	10	10	100	60
430	Broome	m	R. Hogg, Sec. F.C.	11	10	7	7	11	13	10	9	12	10	4	10	12	10	10	11	11	..	8	..
431	Niagara	1	E. S. Holmes	6	13	20	10	20	23	4	6	8	6	..	..	8	4	10	4	5	8	12	15
	PENN.																						
451	Franklin	..	John F. Clayton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
452	Franklin	16	Jas. F. Clayton	8	12	11	14	..	..	..	11	10	12	6	11	5	12	10	13	10	12	14	12
453	Bradford	1	E. B. Barns	5	13	12	10	8	9	8	10	11	5	10	11	..	5	..	5	10	..	..	..
454	Snyder	1	F. Weirick	8	14	..	12	..	..	..	10	..	7	..	..	10	9	..	10	..	..	12	15
455	Franklin	1	O. S. Brown	10	10	15	20	..	..	..	10	10	8	5	20	10	8	10	15	10	10	20	20
456	Fayette	9	F. Oglevee	5	10	10	20	15	25	10	10	10	9	8	9	5	10	10	15	10	10	8	20
457	Dauphin	1	D. Brightbill	10	11	15	15	..	..	..	10	15	10	10	16	12	10	10	11	10	12	15	11
458	Franklin	1	J. Sharpe Nixon	9	11	12	10	..	..	..	9	10	15	10	10	7	7	10	20	10	15	20	15
459	Perry	6	Alex. Kauffman	10	13	20	15	..	..	..	10	11	12	5	10	12	14	10	12	12	..	15	10
460	Montgomery	7	J. C. Boorse	8	10	12	15	..	..	..	10	12	10	14	15	13	9	10	12	14	10	15	15
461	Lancaster	1	Cyrus Brinton	12	10	12	8	..	..	..	10	11	11	..	..	9	11	9	12	12	10	50	50
462	Lancaster	1	Jacob M. Seitz	10	10	..	9	..	..	..	10	..	12	10	10	8	10	12	12	10	12	20	50
463	Cambria	1	John Lloyd	10	10	12	12	10	10	10	10	10	10	10	10	10	10	10	11	10	10	999	500
464	Fulton	51	John Hoke	10	13	15	15	..	..	..	10	10	12	10	9	10	11	10	10	10	12	30	30
465	Delaware	..	Chas. G. Ogden	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
466	Franklin	4	O. H. Anderson	8	10	10	15	..	..	..	10	10	9	4	10	10	8	10	10	10	8	18	18
467	Blair	2	S. B. Replogle	11	11	12	12	..	..	..	10	11	9	10	9	7	10	11	10	10	..	12	12
468	Centre	m	D. G. Klein	10	10	10	12	..	..	..	10	10	8	10	12	10	8	10	10	10	8	40	100
469	Butler	7	Finley Balph	8	..	..	13	..	..	7	10	12	12	..	10	..	8	..	10	10	8	12	10
470	Montgomery	5	A. Zimmerman	10	10	10	14	..	..	..	10	10	10	10	10	10	10	10	14	..	..	15	..
471	Susquehanna	1	G. B. Slack	7	30	20	8	10	40	7	10	15	..	8	8	12	8	10	8	..	..	..	..
472	Fayette	9	Jas. Robinson	10	15	10	20	8	15	7	10	10	7	6	3	10	7	10	3	10	..	3	10
473	Washington	9	John Post	12	10	10	20	..	..	..	12	10	8	5	8	15	10	10	15	15	10	20	20
474	Lancaster	..	H. Musselman	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
475	Columbia	m	A. P. Young	10	11	13	10	..	..	..	10	11	8	8	11	10	8	10	8	10	..	11	30
476	York	5	J. P. Harman	12	10	13	8	..	..	..	11	13	12	5	15	13	7	7	13	13	12	13	15
477	Washington	1	Jos. M. Cleery	12	10	10	16	20	40	10	10	10	12	10	10	10	14	10	15	10	10	8	8
478	Chester	1	A. V. Trimble	10	10	10	12	..	..	..	10	10	9	8	10	10	9	10	10	9	10	20	40
479	Bedford	3	D. M. Bare	10	10	12	15	..	..	..	10	12	..	8	11	10	12	10	10	10	..	10	..
480	Lancaster	1	A. P. McIlvain	..	11	10	9	..	..	..	9	10	8	..	..	10	9	..	..	10	7	20	15
481	Indiana	9	J. M. McGaughey	15	10	14	15	11	20	10	11	14	11	10	10	11	11	10	10	12	..	100	100
482	Luzerne	21	P. Sutton	12	10	11	13	10	12	10	9	10	10	10	11	10	9	10	7	11	10	12	100
483	Cumberland	1	John B. Hoover	12	11	14	16	..	..	..	10	12	9	3	14	11	9	11	8	10	15	30	30
484	Armstrong	9	J. McClymond	7	10	11	15	11	20	12	10	10	10	10	8	13	10	10	9	10	10	15	30
485	Venango	11	A. C Balliet	..	10	11	9	12	20	10	10	15	..	10	15	20	10	..	..	..	..	15	15
486	Susquehanna	4	M. Birchard	10	10	8	9	10	8	10	10	12	5	7	10	12	10	10	5	10	..	5	..
	N. J.																						
501	Cape May	1	J. G. Leach	7	14	20	9	12	20	14	16	26	10	11	15	20	18	14	14	20	10	15	20
502	Mercer	1	S. P. Nicholson	..	10	14	17	..	..	..	13	13	14	7	10	9	12	10	9	15	12	15	30
503	Somerset	7	A. Fleming	10	10	10	13	..	..	..	10	10	8	10	9	7	8	10	10	10	10	13	23
504	Hunterdon	2	D. J. Blackwell	8	10	10	20	..	..	..	10	10	8	10	15	9	12	10	10	8	..	12	60
505	Mercer	2	Ira J. Blackwe'l	12	10	10	12	..	..	..	10	10	9	9	10	10	10	10	10	11	10	15	30
506	Middlesex	1	J. G. Shultz	10	10	15	13	..	..	..	10	13	10	8	13	10	13	10	10	8	13	13	50
507	Mercer	6	C. M. Norton	8	10	12	12	..	..	..	10	10	8	6	14	8	10	12	10	15	10	25	30
508	Warren	9	C. O. Harris	10	13	11	12	30	20	10	10	12	10	10	12	10	10	12	9	10	10	20	20
509	Hunterdon	2	A. L. Melick	5	15	10	15	..	..	..	10	..	10	..	15	..	8	10	..	15	..	15	10
510	Camden	1	J. S. Coles	8	10	12	10	..	..	..	11	12	10	14	8	9	10	11	9	12	10	20	20
	MD.																						
527	Cecil	1	R. F. Rowland	15	12	10	15	..	..	..	10	13	8	6	10	13	9	10	11	15	10	5	4
528	Dorchester	1	Jonas Parker	5	9	11	5	..	..	..	10	11	9	5	5	12	5	..	..	10	9	15	15
529	Allegany	1	T. E. Ogden	10	10	12	15	..	..	..	9	10	10	12	15	8	11	12	12	12	10	30	30
530	Worcester	..	B. E. Smith	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	DEL.																						
551	Kent	1	T. B. Coursey	9	10	10	15	..	..	..	10	12	10	..	..	8	10	20	15	10	[illegible]	20	20
552	Kent	7	M. Hayes	9	10	12	9	..	..	..	10	11	8	[illegible]	12	8	10	13	14	10	12	10	5
553	Kent	1	Robt. M. Reynolds	10	10	10	12	10	10	10	10	10	11	10	11	10	8	10	10	10	10	80	50
	VA.																						
576	Wood	..	E. Meldahl	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
577	Wood	1	J. E. Wharton	20	11	12	14	..	..	..	11	14	15	..	..	13	15	18	20	12	18	16	20
	MAINE.																						
601	Waldo	1	Geo. E. Brackett	15	..	..	..	9	8	10	10	12	10	10	10	12	10	12	10	15	15	15	..
602	Kennebec	..	R. M. Manson	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
603	Penobscot	7	W. W. Johnson	12	..	..	..	8	10	10	8	8	10	8	10	12	10	12	7	11	10	15	15
	N. H.																						
626	Cheshire	1	Geo. H. Gilbert	15	10	10	..	10	12	12	10	10	10	..	..	10	10	10	15	10	10	15	..
627	Merrimac	13	J. W. Simonds	9	12	13	11	15	13	11	10	9	9	7	10	10	9	..	..	10	..	..	..
628	Carroll	1	Joseph Spring	9	..	..	..	11	12	10	11	12	10	..	..	11	9	16	12	12	10	30	..
	VT.																						
651	Bennington	4	Allen Benson	..	..	..	..	9	..	10	10	10	10	10	10	10	10	9	10	10	10	..	..
652	Orange	..	J. R. Cleaveland	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
653	Orange	27	Rufus Brown	15	..	..	..	11	10	8	10	10	12	10	10	10	10	10	9	11	10	30	..
654	Caledonia	7	J. Lawrence	7	..	..	..	12	15	9	9	11	8	12	10	12	8	10	12	14	11	30	..
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656	Franklin	1	E. R. Towle	15	..	..	..	10	11	8	10	10	5	..	..	13	8	10	9	11	9	30	..
657	Windham	4	A. Pettee	10	..	..	..	9	10	10	12	12	10	7	10	11	8	10	12	9	10	20	..
	MASS.																						
676	Berkshire	17	S. S. Jenne	11	..	..	..	10	12	12	10	11	15	10	15	10	11	12	15	12	..	12	..
677	Plymouth	6	Charles A. Wood	7	12	..	8	10	10	9	15	12	10	13	11	7	10	..	7	9	7	18	9
	CONN.																						
701	New London	..	W. H. Starr	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
702	New-Haven	8	E. Phelps	..	..	..	..	..	..	..	..	..	10	..	9	..	9	..	7	..	10	..	..
703	Litchfield	41	G. Reynolds	10	..	..	..	..	..	..	10	9	10	15	10	15	10	10	15	7	10	12	..
704	Litchfield	1	G. Reynolds	9	..	..	..	..	..	..	11	6	11	13	9	10	11	11	12	8	11	14	..
705	Litchfield	4	Wm. Wanzee	9	10	11	9	9	9	10	10	10	9	10	9	10	9	11	8	11	9	10	10
706	New-London	13	J. R. Barstow	..	..	..	..	..	..	..	10	10	10	10	12	10	10	10	8	12	10	10	..
707	Hartford	3	O. D. Case	8	..	..	..	18	40	11	9	11	16	8	12	12	10	14	9	10	10	15	30
708	New-London	1	T. A. Chapman	12	..	..	..	..	..	..	10	10	10	10	10	10	10	10	7	10	..	..	30
	R. I.																						
726	Newport	1	J. E. Macomber	12	..	..	..	..	..	..	12	13	10	10	10	12	10	10	10	12	10	12	..
	KANSAS.																						
751	Brown	1	David Peebles	15	12	50	12	10	30	10	8	30	13	..	..	50	10	..	..	..	..	..	..
752	Shawnee	7	Wm. F. Johnston	12	40	10	[illegible]	4	10	8	10	12	10	..	..	..	..	..	..	20	10	..	30
753	Wyandotte	2	R. B. Taylor	12	13	30	10	8	30	10	12	20	10	20	10	20	10	10	10	20	10	15	10
	COL'RADO.																						
776	———	1	Wm. W. Byers	10	30	..	15	50	..	20	10	..	12	..	..	30	20	..	..	20	20	10	..
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801	Platte	1	Henry J. Hudson	10	..	..	..	15	12	10	10	10	15	..	..	10	5	..	..	10	5	.:	..
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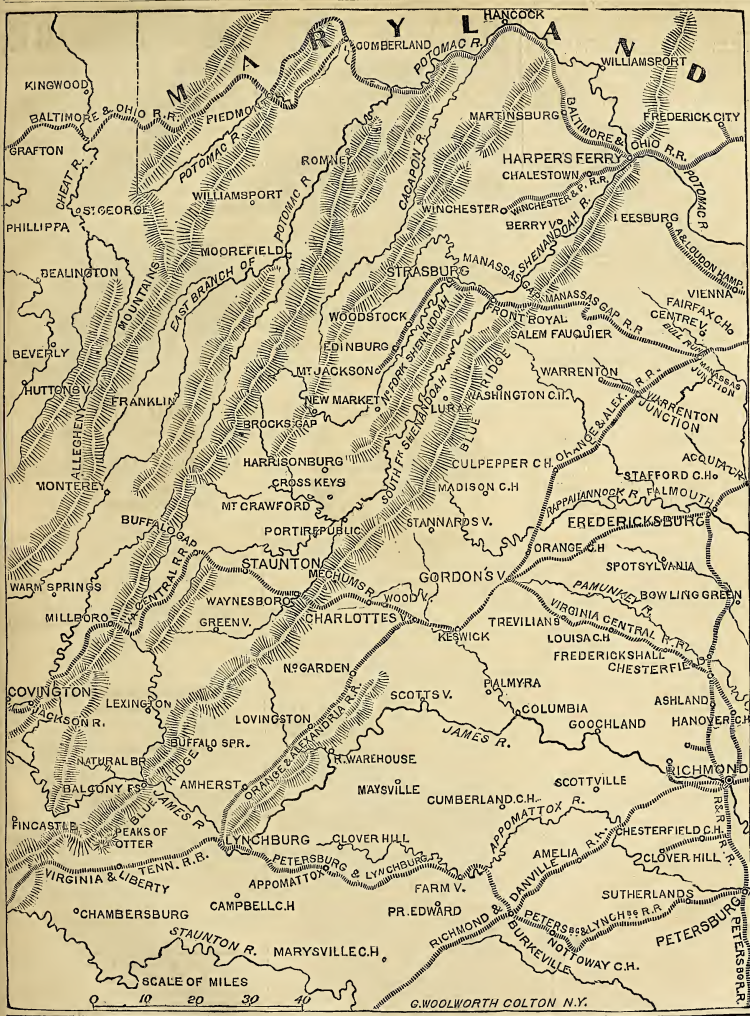

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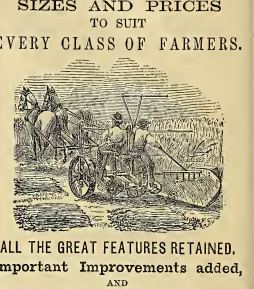

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The Postage on the Agriculturist is positively only Six Cents a Year.

We hear that several Post Masters are charging 12, 18, 36, and even 72 cents a year on the *Agriculturist*. This is wrong. The law expressly says that a Periodical issued at stated periods, and not weighing over 3 ounces avoirdupois, shall be charged *one cent* per number, and only *half* this sum if paid quarterly in advance. The paper for the *Agriculturist* is purposely manufactured so that it shall weigh a little *less than three ounces*. We would add an occasional extra page for more advertising room, could we do so without increasing the postage to our subscribers. The Postmaster General has several times decided that postage on the *Agriculturist* is only six cents a year. See one of these decisions on page 96, volume XVII. There has been no change in the law or in the weight of the paper since. The paper must be weighed *dry*, and *without the wrapper*. Subscribers will please promptly inform us of any future over charge.

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It is hard for the Publisher to alone bear all the losses arising from the carelessness or over-sight of any of the 18,000 Postmasters and carriers who have the handling of the *Agriculturist* between the office and the subscribers. But since Uncle Samuel monopolizes the carrying business, and won't stand any losses, and we can't compel him to, we shall cheerfully send a second copy of any number when the first one mailed fails to reach its proper destination, on being notified of the fact. We suspect from the reports, that one of the packages sent to Providence, R. I., last month, has not got there yet. Let us know who are without that Number.

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An American Exhibition OF Pumpkins, Squashes, and Ornamental Gourds.

There will be a Public Exhibition of **Pumpkins, Squashes, and Ornamental Gourds,** at the office of the *American Agriculturist*, 41 Park Row, New York City, opening on Wednesday, Nov. 5th, 1862, at which the following prizes will be paid by the Publisher, upon the official award of competent Committees.

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* All to be grown by one person and to be accompanied by a verified statement from the grower, and two disinterested persons who assist in gathering the specimens.

Note 1.—The specimens receiving the Prizes will remain on Public Exhibition at the pleasure of the Publisher who offers the prizes. The other specimens will be subject to the order of the exhibitors, or they will be sold at Auction or otherwise disposed of, for their benefit.

Note 2.—All Exhibitors must notify us of their intentions by Oct. 10th, and deliver specimens for competition on or before Nov. 3d. Specimens to be delivered free of charge.

American Agriculturist in German.

The AMERICAN AGRICULTURIST is published in both the English and German Languages. Both Editions are of the same size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs. A club may be part English, and part German.

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For June and July, 1862.

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Sent Free by Mail.

The Strawberry premiums offered previous to May 10th seemed to give general satisfaction. We sent out many thousands of plants to almost every part of the country, all of which, we trust, are growing finely. (The plants were growing too rapidly to be forwarded by mail *after* the advertised time, May 10, and a few sent after that date to late applicants, perhaps did not reach them in so good order as if sent earlier.) In response to many requests, we continue the Strawberry Premiums, the plants to be sent out the latter part of August or the first of September, according to the season, and the locality for which they are designed. We are propagating plants in our grounds, and have engaged a supply from elsewhere. At present, we will only propose the **Triomphe de Gand,** and **Hartlett,** as hitherto offered; but should the present season develop superior qualities in other new varieties, an equivalent of the new selections will be given. A list of such sorts (pe haps several) as we can furnish will be published in the *August Agriculturist*. Plants set out in August, or early in September, will multiply somewhat this year, and bear next Spring.

CONDITIONS;

PREMIUM I. To any person forwarding, (now or before August 1st), ONE subscriber to the *American Agriculturist*, at $1 a-year, we will present (if desired **Ten Plants** of the **Triomphe de Gand Strawberry,** or an equivalent selection from other sorts that we may have, to be sold from in August or September, according to their destination, as above stated.

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American Agriculturist.

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FOR THE

Farm, Garden, and Household.

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☞ Other Journals are invited to copy desirable articles freely, if each article be credited to *American Agriculturist.*

August.

"Thrice happy, he who on the sunless side
Of a romantic mountain, forest-crowned,
Beneath the whole collected shade reclines;
Or in the gelid caverns, woodbine wrought,
And fresh bedewed with ever-spouting streams,
Sits coolly calm, while all the world without,
Unsatisfied and sick, tosses in noon;—
Emblem instructive of the virtuous man,
Who keeps his tempered mind serene and pure,
And every passion aptly harmonized,
Amid a jarring world with vice inflamed."—THOMSON.

These forest-crowned hill-tops and mountains, where it is really cool in these glowing Summer days, are more easily found in the poet's imagination, than in nature. The air is so sweltering that we find it difficult to believe that they exist at all. Clothing is a burden, even the fine linen of snowy whiteness reflecting every ray of the sun. The air has a furnace breath, and makes every living thing swelter. Even the inanimate world cries out under the infliction. The trees stand with drooping leaves in the breathless air, the grass loses its fresh green look, the flowers hang their heads or close their petals, big drops stand on the water pitcher as if uttering its tearful protest against the torrid heat. The very thought of ice sends a thrill through the blood like the rapture of song. We do not doubt that there are cool places in the world, but they are not very easily reached. In the City every thing is baked. Put your hand upon the brick wall, and you can hardly endure the touch. There is hardly a dry thread in your shirt, by the time you are fairly seated in your office. The easiest manual labor is a burden. Mental effort is the very punishment of Sisyphus. Every thought is heavy as a bowlder, and if you attempt to roll it into place, it comes back again with a rebound. You find yourself doubting if your brains are not baked, like every thing around you.

In the country it is not quite so bad, for there is sometimes a breeze there, and dew gathers on the grass at night fall. But in the broad glare of the sun, every thing wilts, and all creatures flee to the shade. Yet this bright sunshine so characteristic of our Summers, and so uncomfortable while it lasts, has its advantages. We would not willingly exchange it for the milder skies of Britain, with her greener fields, and boundless turnip crops. Our sunshine is as golden to the farmer as to the poet's vision. To him it is a real Midas, changing every thing it touches into gold. These few weeks of extreme heat give us many of the advantages of the tropics, without their evils. Our great cereal crop is of southern origin, and is only made a success by the torrid heats of July and August. It luxuriates in the sunshine, when the thermometer points to a hundred, and bears drouth better than any other of our crops. It is often a failure in the northern belt, where it is cultivated, from the want of a single week of hot weather. It may droop at midday, but it grows apace at night, when heat drives sleep from the farmer's pillow. These fierce burning days, then, mean great crops of Indian corn. The bright rays are transmuted into the golden grain, and when sold become the real gold in the farmer's purse. Our country is the Paradise of this plant, and one can hardly comprehend the magnitude of the corn crop. It is easy to write a thousand millions of bushels, but difficult to take in the conception of so vast a bulk. It is nearly a bushel for every inhabitant of the globe, and thirty bushels to every one of our own population. What countless stores of food for man and beast are showered upon us in the sunlight! The crop this year, well sold, would pay the year's expenses for our great war.

These hot days also mean melons, one of Nature's bountiful provisions to slake the thirst of parched lips, and cool the fevered blood. We see them luxuriating in the sands of Long Island and the Jerseys, and even far up the valleys of the Connecticut and the Hudson, as juicy and high flavored as in the Carolinas. In some localities they require a little help from the gardener's art, but in this latitude they are as sure as Indian corn. They are grown very extensively, and could be produced in any quantity were there a market for them. We see them in huge piles on the boats and wharves, and at the green-grocer's. They are sent far inland to the cities and rural villages, wherever the sales will pay. They form a much more healthful dessert than pies and are quite as well relished.

In these tropical days tomatoes are a possibility. They have become a popular dish within the last twenty years, and are now almost as widely known as the cucumber. They propagate themselves even more readily, and flourish as a weed where they have once been introduced, if they are not carefully gathered in the fall. Though not generally relished at first, most people become very fond of them after a short acquaintance, so that they even supplant the cucumber. They are a much more healthful and nutritious dish, and what the doctors lose the people will gain, when it entirely displaces its rival. Though not so great an acquisition as its congener, the potato, it came much more rapidly into general use, and is an article of considerable commercial importance. There is always a large demand for tomatoes in their season, which covers about two months, but which may be almost indefinitely extended by putting up the fruit in cans and jars.

A large part of the favorites of our gardens—corn and tomatoes, squashes and melons, egg plant and okra, peppers and sweet potatoes—are natives of the tropics. They have been introduced among us without any concerted action, and stand upon their own merits. Some of them require a little more skill and care in their cultivation than indigenous plants, but they are likely to grow in popular esteem as horticulture becomes every year more generally appreciated. We have no reason to believe that these plants exhaust the list of garden vegetables from the south that may be acclimated in the north. The happy accidents that have brought these to our notice will gradually introduce others. Every such acquisition is an addition to the comfort of families, and to the national wealth. Health and refinement are both promoted by the variety of food which the family consumes.

Baron Liebig measures the civilization of a people by the quantity of soap they consume. A still better test is the variety of fruits and vegetables they produce in their gardens. The tropical man with his everlasting rice and plantains, and the Esquimaux with their seal and blubber, are rather low types of humanity. Between these extremes we find a greater variety of food and a higher degree of civilization. But this is not purely a matter of climate. Upon the same line of latitude in our country, we find very different tables spread for human repasts, even among farmers. In one home you may find almost every thing that will grow in the climate, taking its turn upon the table in its season. The strawberries come in May and the apples go out with April of the following year, a constant succession of good things, that make the meal hours pleasant reunions of the whole family. In another you shall find the everlasting hog and hominy in some of its forms every day of the year, or potatoes and salt junk the prominent features at dinner for six days in the week. The vegetable garden is regarded as a nuisance and the fruit yard and orchard are unknown. "Familiarity breeds contempt" with things, if not with persons, and the same dish at dinner, after a while, makes a family morose, and unsocial. A new dish is a nest of new ideas. A smile lights every countenance and the tongue is unloosed. We forget dog-days in gumbo soup and chicken salad, and other such-like things. And no idea is more erroneous, than that it is wrong to seek after enjoyment in eating. We ought to enjoy our food, and if we cultivate simple tastes, the greater variety we have, the better,

Calendar of Operations for August, 1862.

[A glance over notes like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 38° to 45°; but will be equally applicable further North and South, by allowing for latitude.]

Farm.

The work for this month, although arduous, is less driving and more diversified than that for the one just closed. Harvesting and haying are nearly completed, and what remains to be done should be urged forward with sufficient promptness to save the loss by shelling, which attends harvesting grain that has become too ripe, and the loss to hay by too much drying. This done, the attention may then be profitably occupied until time for Fall sowing, with making improvements, such as draining, getting out muck, repairing buildings, and implements, working roads, etc. Little things postponed in the hurry of harvest, should be attended to at the earliest opportunity. Their increase is liable to equal that of spiders and compound interest. Now is a good time also to look up additions to your stock, if more is wanted, or if there is room for improvement in breed. Judicious investments of this kind are quite sure to pay. Good stock is the best *bank* in which to "deposit" the surplus products of the farm. So if possible keep all your farm will support well.

Barns, granaries, etc., should often be examined to see that air is let in, and rain, dampness, vermin, fowls, etc., kept out. Bear in mind also the preservative properties of paint. See that all store animals may have plenty of light, as well as air. Both are essential to their health.

Butter—See that everything used in butter-making is scrupulously clean. It pays butter-makers to be particular to do all of their work thoroughly and perfectly as possible. Wash out every particle of butter-milk from the butter, if to be kept for any length of time, and keep the butter as cool as circumstances will permit.

Cattle should not be allowed to loose flesh between this and winter. It is cheaper to keep them in flesh now than to regain it in winter. Milch cows especially need generous fare. Give them a dessert from the sailing's and/or of bran and shorts wet up. They will not object to an occasional cabbage, and cabbages are excellent for them and for milk.

Corn will soon furnish a delicious addition to table vegetables in the shape of green corn, which if well cooked and thoroughly masticated is wholesome. If wanted for future use shave from the cob and dry for succotash, etc. (See item in basket.) We have seen whole ears preserved in salt brine which had a very inviting appearance on the early warm days of the following Spring. Keep the weeds out of the corn as you would robbers from your hen-roost, but guard against mutilating and displacing the roots of the corn by deep tillage.

Draining should be attended to now, if needed and practicable. Be content with nothing short of good underdraining, as this will not carry off one of the great elements of the farmer's wealth—manure.

Fallows, or "Summer Fallows" should be looked to. Let them not become nurseries of foul weeds. You can pull by hand one weed now cheaper than you can plow up the hundreds it may produce next year.

Fences are becoming less used, as the laws restraining the roaming at large of stock are improved, perfected, and enforced. But wherever needed, let them be substantially built, and kept in good repair. "Whatever is worth doing at all is worth doing *well*." Do not let them harbor a Pandora's box of weeds.

Gleaning usually pays, but how well of course depends upon the thoroughness of the raking.

Grain, especially that which can not be put under good shelter, should be thrashed at the earliest convenience. Make thorough work of cleaning, whether for seed or market. It is usually better to sell as soon as the market is fairly fixed. Use all that can be turned to account in fattening stock.

Hay—Cut any remaining. Gather coarse wild grasses for bedding for animals. Secure salt marsh hay and sedge, during the low tides of August, and remove to safe quarters. Surround stacks with good fences to keep cattle from wasting.

Horses, repay humane and careful treatment. Give them the luxury of shade and air, when practicable, during the heat of day. Use nets, or try a wash made by steeping walnut leaves, to keep off the tormenting flies. They will enjoy freedom in the pasture, nights.

Insurance—Good insurance companies and lightning rods have saved many a man from sudden destitution. It is usually advisable to invest a percentage judiciously in this direction.

Irrigation—Consider well, and try experiments. The subject is of momentous importance to farmers individually and to the country at large. (See articles on pages 193 and 209, July *Agriculturist*.)

Manures—Purify the atmosphere around house, sheds, barn-yard and barn, by transferring all manures collectable thereabout to the mowing lands, or compost heaps. Gather unripe weeds, refuse straw, etc., to absorb liquid manures in the hog pen and cattle yards, and remove and renew often. The health of your animals and the wealth of your acres will be promoted thereby.

Meadows—Remove bushes, rocks, and other obstructions from mowing lands. Top dress new mown lands with fine compost, to protect the roots from scorching, and quicken the young growth. Keep stock from mowing until the grass is well started, and do not allow it to be eaten off very close.

Millet or Hungarian Grass—Cut before the seed ripens, if intended for hay. Feed sparingly.

Oats—The harvest is at hand. Cure the straw carefully: it is valuable for feeding.

Pastures—Occasionally scatter cattle-droppings with a maul. Allow no weeds to ripen seed. Sow salt about their roots, to attract the cattle and sheep, and prevent the young shoots springing up. Suffer no fields to be fed too closely.

Potatoes—It is claimed that rot may be arrested by promptly removing affected tops or haulm. In place of early harvested potatoes, quick-growing turnips or late cabbages may be grown.

Poultry may be benefitted by gleaning the grain fields after harvest. If confined to the yard, give plenty of water, gravel, lime, and occasionally a little animal food, to stimulate them to lay. Fatten chickens and ducks for market early; it takes less grain in warm weather, and the prices are more remunerative.

Root Crops—Thin out where too thick. Keep the ground light and free from weeds by frequent use of the cultivator and hoe.

Rye—Harvest any remaining. Glean the fields with the horse rake, and thresh out the scatterings for grinding and feeding to hogs. Select the best growth for seed, and thresh with a flail. Rye flour as sponge for bread, rises quicker than wheat flour.

Sheep—Separate rams from the ewes and give the lambs a rich pasture by themselves or with the yearlings. Keep a few older sheep with them as leaders of the flock. Examine the udders of ewes while weaning their lambs, and draw the milk occasionally if necessary to prevent their becoming caked. Salt freely, and apply tar to their noses to repel the fly.

Swine—Keep them growing by liberal feeding. Commence fattening. Early pork is usually in demand, and it costs less to make it. Feed with green food frequently. Unthrashed pea vines are well relished, and are wholesome diet. Corn is fed, try boiling, or at least soaking.

Timber cut at this season is believed to be most durable. Prepare any needed for fencing or building next season. Strip off bark as soon as cut.

Timothy sown late this month, will ordinarily give a good growth next season. If sown with winter grain, leave it until next month or the following Spring. Use from eight to twelve quarts of seed per acre, according to circumstances.

Turnips—Strap leaf, or flat varieties, may be sown, among corn, after early potatoes or on other unoccupied ground. (See article on p. 243.)

Winter Grain—Prepare grounds, to be sown late this, or early next month. It will succeed on sod ground, but preference is generally given to cultivate it after fallow, oats, or an early hoed crop.

Orchard and Nursery.

Sparse crops of fruit in many parts of the country during several years past, had so checked the ardor of enthusiastic fruit-growers that too many of them have neglected the care of old orchards or failed to plant new ones. Those who have given proper attention in these respects, are now fully repaid, and in the abundant crops this year, they feel encouraged to believe that fruit trees may still flourish and bear, and yield, as now, a remunerative harvest.

Gathering the early fruit in the orchard, and budding in the nursery, will be the chief labors of August. The ripening apples and pears must be secured or they are lost. Where a good market is at hand, the fruit should be carefully picked and sold. If there is no market, gather and make into cider, dry or put up in bottles for winter use. In gathering the fruit, great pains should be taken not to injure the trees. Heavy boots are apt to start the bark on the branches, if worn when climbing about in the trees. Thrashing the trees with poles is an abominable practice, beating off the fruit spurs with the fruit. Some of the late fruit trees will need to have their overloaded branches braced or tied up, or what is better, a portion of the fruit removed, that the remainder may be finer, the tree not overtaxed, and the branches saved from splitting down beneath their burdens.

If the trees have not been pruned, they may well receive a trimming now, where it can be done without injury to the fruit. In the nursery the knife may be used to good advantage upon small trees. The work of budding the nursery seedlings should proceed, and it is better to bud than to graft small trees, unless they are allowed to attain a sufficient size to graft in the branches. Most people, however, prefer to buy "grafted trees" as they are called, hence the stocks of one and two years old should be budded this month. See full directions in July *Agriculturist*. Round off any stocks budded last season and not already cut off close to the bud.

If borers have been permitted to hatch out and penetrate the bark of peach, apple or quince trees, they may be found and cut out before they have done much damage. They are still in the bark, or between the bark and new wood, into which they will penetrate, if not disturbed, upon the approach of cold weather. Continue use of the "soap" remedies given last month.

The growth of the present season is now sufficiently mature for layering, or inarching, to increase or change the variety. Peg down and cover with earth the new shoots of propagating stools, and tie the branches of inarched stocks to stakes, or other supports to prevent shaking about by the wind.

If the month proves dry, water must be given to the seed beds, especially those of evergreens which should also be partially shaded from the hot sun. Trees transplanted in the spring may also require an occasional watering, but a good mulch is far better.

The plow, cultivator, or horse-hoe, should be run through the nursery rows frequently, to keep down weeds and lighten the soil. The hand hoe will also be needed to work closely about the trees.

Kitchen and Fruit Garden.

The labors of the judicious gardener are now being rewarded by supplies of various delicious edibles, which may be kept up until Jack Frost looks up the teeming earth for a season of repose and recuperation. The surplus of most kinds may be preserved for winter use. The space from which early peas, potatoes, etc., have been gathered, may be used again this season for quick-growing turnips, late cabbages, spinage, etc.

Asparagus—Keep clear from all weeds, and gather and clean the seed as it ripens, and sow at once if new beds are needed. Time is saved, however, by setting out roots in Autumn.

Beans will soon be ready for table use, and the young pods of bush varieties are excellent for pickling, and may also be kept good for the table by packing in salt. (See article on page 246.) Plant a few for a Winter supply.

Beets—In pulling for use, take them from the thickest parts of the bed, to allow the remainder plenty of space. Keep the ground well loosened and watered, and free from weeds. Mark by small stakes the earliest and best to be saved for seed.

Blackberries—Pick as fast as fully ripened, but be not too hasty, especially with the New-Rochelle, as some time is required to attain its full degree of excellence. Any surplus may be dried, preserved in bottles, as directed on page 214 (July No.), manufactured into wine, or the juice bottled, as directed in last number for currants.

Cabbages, Cauliflowers, and Broccoli—Hoe often, even twice a week is none too often. Set out plants for a late crop, and sow seed for Fall greens, and keeping in cold frames.

Celery—See article on pages 213, July, and 243, this No.

Corn—Keep out all weeds, but do not disturb the roots of the corn. Mark the earliest and most prolific stalks, to be preserved for seed. Examine to prevent depredations of the corn-worm which eats downward from the silk to the kernels.

Cucumbers are now attaining sufficient size for table use and for pickling. The yield will be increased by not allowing them to ripen, also by pinching off the largest runners. Reserve the best for seed, and remove all other buds from vines that are set apart for ripening seed. Ripe cucumbers, properly pickled, are excellent.

Currants and Gooseberries—Prune as soon as the fruit is gathered. Remove from one-third to one-half the old wood, and shape to tree form. (See recipe for bottling currant juice on page 215, July *Agriculturist*.)

Egg Plants—The growth and ripening of fruit will be hastened by placing a board painted white on the north side of the hills. Hoe well; hill slightly.

Espalier Trees—Keep well trained and pinch off superfluous growth.

Grapes should be zealously guarded against insect ene-

mies and mold. Tie the leaders to the trellis. Where the ends of the bearing branches have been pinched off, the side shoots will need to be shortened in.

Herbs—Complete the gathering and drying during the period of blossoming.

Hoe to loosen the surface and to destroy weeds.

Hops—Pick, spread until perfectly dry, and store in bags, or pack in bales.

Lettuce—Sow in vacant corners for Autumn use.

Melons—Remove all fruit, except three or four specimens to each vine; those remaining will be larger and of finer flavor. Place straw, or a board, under those nearly ripe, to protect from worms and rot; occasionally turn them to ripen equally on all sides, but do not injure the stem.

Onions—Gather for use or for market as soon as they ripen, but if to be kept for any length of time, leave them exposed to the sun, until properly cured. Sow for "pips," to be left in the ground during the Winter, for early use next season.

Peas—Most kinds have yielded up their fruit. Clear the ground from straw of early crops and feed it to swine. Fill the vacancy with turnips, or late cabbages, lettuce, onions, etc.

Potatoes—Remove and burn all diseased tops or haulm. Harvest and market early crops, and replant the ground as directed above.

Raspberries—Cut out all except two or three of the strongest young shoots for each root for the crop next year, and keep them properly trained to the stakes or trellis. Hoe in a compost of well-rotted manure and ashes.

Seeds—Save the earliest and best of all kinds. Label each one distinctly with the name, and time of raising; keep in a dry, dark place, secure from vermin.

Spinage—Sow at intervals for Autumn use.

Squshes—Remove eggs of the squash bug (*Coreus tristis*) from leaves, and destroy the insects already hatched out. Save the earliest and best squashes for seed.

Strawberries—Clip the runners of those in hills as they appear. Young vines may be transplanted the latter part of this month. It will pay to do the work carefully, and water as often as needed.

Tomatoes—Continue to trim the vines, and destroy worms by hand picking.

Turnips—See article on page 231.

Weeds—Save quarters by giving weeds no quarter. Cut down expenses by cutting down weeds before they have had time to ripen their seeds. Those whose seeds are nearly ripe, should be burned. Cast others into the compost heap.

Flower Garden and Lawn.

August heat is trying to the less hardy exotics. Great care and judgment are needed to carry them safely through. The great mistake of too frequent sprinklings and too few thorough waterings, is often made. Mulching is usually all that is necessary, but if, upon digging into the soil, it is found dry to the depth of three or four inches, take out earth near the roots, pour in a good supply of lukewarm water, and, when soaked away, return the dry earth. This will prevent surface-baking.

If you have any new plant or flower which you wish to perpetuate, now is a good time to note its peculiarities, and mark, by string or otherwise, so that the seed may be saved. As fast as those not wanted for seed complete their blooming season, cut them down if perennials, and pull them up if annuals, to give place to others. Late sown plants should be ready to transplant to spaces otherwise vacant during the remainder of the season.

Sweet Williams, carnations, daisies, phloxes, hollyhocks, polyanthus, campanulas, etc., will give bloom next season, if the seed is sown now.

Budding—This is a proper time to bud the rose, but the practice can only be recommended on a smale scale and for amateurs. The buds often die out in a few years. Oranges, lemons, magnolias, and many of the flowering shrubs may also be budded.

Bulbs—Such as the hyacinth and tulip, should be lifted as soon as the leaves turn yellow, the offsetts removed, and the bulbs dried and put away in paper bags until Autumn, then re-planted. This has a tendency to keep them more vigorous and truer to their colors. If necessary to remove them before the foliage is ripened off well, take up a ball of earth with the bulb, and re-set until the foliage is ripened.

Climbers—See that they have suitable supports.

Dahlias—Keep well tied up and prune where growing too thickly. One, or at most two good flower stalks per root is sufficient. A mulch about the roots in dry weather will benefit them. Cut away the dried flowers as fast as they lose their beauty. Watch for and destroy insects, especially the greyish worm which bores into the stalk and feeds upon its juices.

Fuchsias may now be propagated by cuttings and layers. Their continued bloom places them among the finest gems of the flower garden.

Hedges should receive their final Summer clipping during this month. Cut from the top. If cut late in the growing season, the new growth will not sufficiently mature before Winter.

Hoeing should be continued whenever needed.

Houses—If any are to be built this season, let the work begin at once. Make needed repairs and alterations in those already built. A cold house for grapes and other hardy plants can be built at a trifling cost—usually a loan to against some other structure.

Insects—Exterminate in every practicable way. Do not let them increase by a second crop at this season. Even if they have done all their injury for the season, allow none to weave their cocoons for next year.

Layers of many of the woody plants can still be made with a probability of their rooting before Autumn. Use wood of the present season's growth. Shoots laid down in early Spring, if well rooted, may now be severed from the main stock.

Lawn and Grass Edgings—Mow evenly as soon as 6 to 8 inches high. Frequent cutting causes it to thicken at the bottom. A sprinkling of guano water, or liquid manure, after mowing, will cause the grass to start with vigor. New lawns may be sown adding a little Winter wheat, or rye, to protect the roots during the Winter.

Mignonette will still bloom late in the season, if sown at once. It will also form good house-plants for Winter.

Pelargoniums—Start cuttings for a Winter stock to bloom in-doors. Thin out and head back plants to give them a good form.

Potted Plants will need care at this season. Water frequently, and loosen the surface soil, if not mulched, removing weeds and moss. Pot off a good stock of the various plants intended for early Winter flowering.

Pruning should have been mostly completed last month according to directions then given.

Roses—Keep up the war against the slugs. Budding may still be performed on late growing sorts, and layers of new wood pinned down. The remontants should now show a second bloom.

Verbenas—Layer plants for Winter flowering. The past few years have added many new seedlings, some of remarkable beauty, and others quite *fragrant*.

Weeds—Keep from the borders, walks, from growing among the grass upon the lawn, and from every foot of your premises.

Wild Flowers—Some may be found which, by careful cultivation, will prove valuable additions. The peculiarities of soil, shade, moisture, etc., where they grow naturally, should now be noted for future guidance.

Green and Hot-Houses.

Scarcely anything additional need be said with reference to these, as most of the ordinary house plants are now in the open ground. A good supply of potting earth should be prepared, both for present and future use. It is better after having lain in the heap some months, hence a large stock should be provided. A good potting soil is made of 3 parts leaf mold, 1 part loam, 1 part sand, and 1 part old manure.

Houses should be put in readiness to receive tender plants the latter part of next month. It is always better to have all painting done some weeks before plants are brought in.

A good stock of cuttings of various kinds, intended to form late Fall and early Winter flowering plants, should now be put in and properly cared for. A house, or frame is needed to start them well.

Potting should be attended to now, that the plants may be ready for an early Winter bloom.

Apiary in August.

Prepared by M. Quinby—by request.

In sections where the crop of buckwheat is raised, bees will begin to store honey from it in the surplus boxes, from the 1st to the 10th of this month. All boxes containing the white honey, must now be removed, if it is wished to keep it pure. A box may be nearly full of clover honey, and a few ounces of buckwheat outside, or next the glass will make it appear as if it was all that quality. Four pounds of one quality, is worth as much in market, as six of the other, hence the advantage of keeping it separate. Where there is no buckwheat, there will be nothing further added to their stores—except, perhaps, on the western prairies; and all surplus boxes may be removed now. All cells not sealed up, will be likely to be emptied soon. Full boxes certainly should be taken off, as the honey grows darker when left on. Do not put on glass boxes now unless there is a fair prospect of their being needed. A weak colony would be likely to do nothing more than soil the glass with propolis, and make it look bad for another year.

Continue the use of the sweetened water, and other means to destroy moths and worms. Keep all dust and filth swept out clean from under small colonies. Weak swarms in the movable comb hive may be much benefited by giving them a comb or two filled with sealed brood from a strong colony. The brood hatches in a few days, adding greatly to their numbers. New colonies that were formed by simply dividing the combs, as mentioned in Apiary in June, should now be examined, and if the division without a queen was strong enough to construct combs, while rearing one, they would make all store or drone comb, which is unprofitable for rearing brood. Remove such combs now, replacing with empty frames, that worker combs may be constructed instead. The honey so stored is best quality, almost equal to that in the surplus boxes and may be used for the table, or it may be put away to assist some light colony through the winter.

Exhibition Tables at the Office of the American Agriculturist.—

The following articles have been presented since last report:

Fruits, etc.—*Strawberries*—White Strawberries, (very fine), from Robert Benner, New-York.... Triomphe de Gand, (very fine), from A. Child, Newmarket.... Triomphe de Gand and British Queen, from F. A. Wilkisson, 926 West Washington Market, N. Y., and grown by Mr. Knox, Pittsburg.... Great Admirals, from W. S. Carpenter, 329 Greenwich-st., N.Y.... Russell's Prolific—a new seedling—from Geo. Clapp, Auburn, N. Y.... White Alpine Strawberry—seedling—from W. S. Carpenter, Rye, N.Y. .... Cutter's Seedling and Triomphe de Gand, (both been in bearing six weeks), from R. & G. Marshall, Poughkeepsie, N. Y.... *Cherries*—Triumph of Cumberland and Reine Hortense, (fine), from David Miller, jr., Carlisle, Penn.... *Currants*—La Versalles Red, and Red Cherry, from E. S. Woolsey, Milton, N. Y.... White, (very full bunch), from C. Smith, Morrisania, N. Y.... Red Dutch, (2 years old cuttings), and Black Naples, (both fine), from Mrs. E. C. Wheeler, Fairmount, N. J.... Red Cherry, Red Dutch, White Transparent, White Provence, (very fine), White Dutch, White Clinton and White Grape, from W. S. Carpenter, Rye, N. Y.... Red Dutch, (very fine), and Black, from W. P. Heins, Woodstock, N. Y.... *Raspberries*—Doolittle, Black Cap, Brinckle's Orange, and Anges Fillbasket, from W. S. Carpenter, Rye, N. Y.... Impetuale, (fine), and Hornette, (both new), from R. & G. Marshall, Poughkeepsic, N. Y.... *Gooseberries*—From Mrs. Hall, Williamsburg, L. I. From Mr. England, Bushwick, L. I.... From E. & G. Marshall, Poughkeepsie, N. Y.... *Mulberries*—Everbearing and 2 other varieties, from Mr. Tuttle, New-Haven, Conn.... *Apples*—Roxbury Russet, from Henry Day, English Neighborhood, N. J.

Flowers, etc.—Cut flowers, from A. S. Fuller, Brooklyn, L. I.... Fuchsias and Nasturtiums in pots, and cut Flowers, from Mrs. O. Judd, Flushing, L. I.... Cut Roses—Reine Hortense—from W. A. Burgess, Glen Cove, L. I. .... Cut Blooms of Magnolia macrophylla and Thompsoniana, (very fine), from Parsons & Co., Flushing, L. I. .... Gloxiana in pots, (very fine), from A. Bridgman, 876 Broadway, N. Y.. Cut Flowers from Jacob Braun, Williamsburg, L. I.... Cut Flowers and Bouquet, from Prince & Co., Flushing, L. I.... Cut Roses, Heliotrope, Honeysuckles, etc., from Wm. A. Burgess, Glen Cove, L. I. . Arum dracunculus and Dragon Flowers, from H. T. Haviland, Brooklyn, N. Y.... Marchantia polymorpha, from P. V. Leroy, N. Y.... Cut Roses from A. Cummings, Esq., N. Y.... Cut Flowers of Cimicifuga racemosa and Pyrola elliptica, from Mrs. E. C. Wheeler, Fairmount, N. J.

Vegetables, Seeds, etc.—New Potatoes grown without tops, from T. W. Field, Brooklyn, L. I.... 29 Potatoes, crop of a three-eyed piece of Early Sovereign Potato, planted April 8, 1863, from Wm. F. Heins, Woodstock, N. Y.... Wild Mexican Potato, planted April 10, 1863, and taken up June 27, 1863, and Kidney Beans, from G. M. Usher, Port Richmond, Staten Island, N. Y.... Heads of Timothy 11 inches long, grown on reclaimed swamp, from T. Hale, Wales, N. Y.

Implements, etc.—Model of Dikeman's Patent Corn Marker, from Dikeman & Hewlett, Hempstead, L. I.

Miscellaneous.—Trophies from Secessia, viz: 25c. Shinplaster, Bone Ring, Musket, Trumpet, and Gloves—from 1st Regt. N. C. Cavalry, per Mr. Sharp, New-York. ....Very small Hen's Egg, from Mr. Nostrand, Flushing, L. I.... Large Dorking Egg from Rev. J. Weaver, Fordham, N. Y.... Very small Bantam Eggs, from Robert Thompson, Weeksville, L. I.... Wine—Sorghum, (fine), from Rev. A. Myers, Springfield, O.... Currant Wine, J. C. F. Rommel, N. J.... Clothes Washer, W. M. Doty,

Containing a great variety of items, including many good Hints and Suggestions which we give in small type and condensed form for want of space elsewhere.

State and County Fairs—Our List.—On page 250 will be found a list of *all* the State and County fairs of which we have any knowledge. We have been very diligent in watching the papers for reports of meetings, appointments of fairs, etc., and both in this way and through our correspondents we have only learned of those there given. May we not appeal to our readers, especially to such as are interested in Agricultural Societies, to furnish us the information at once, by marked papers, premium lists, or letters, telling the time and place of holding any County or State Fair which is not recorded in the list?

Royal Agricultural Show a Pecuniary Failure—Rain and Crops in England.—Mr. Judd writes in a postscript to our letter dated London, July 5th, that "the experiment of holding the Great Annual Exhibition of the Royal Agricultural Society, in London, at a time when there were so many other attractions, proved a failure pecuniarily, though very fine as a show. The total receipts amounted to £12,000 ($60,000), but this was from $15,000 to $20,000 below the expenses. The *weather* here is still very rainy—it pours down every other day, and drizzles during parts of the intervening days. It would hardly seem possible that the hay crop should be gathered in even tolerable condition, or that the wheat crop should make any progress. Considerable fears are expressed here as to the prospects. We can not rejoice at the losses of our friends elsewhere, even though it may benefit us; but perhaps Providence may compel jealous foreigners to aid us in bearing part of our expenses, by compelling them to purchase our grain crops...."

The Homestead Law.—The following letter from Speaker Grow, interpreting this law for a Kansas subscriber, will explain itself:

SPEAKER'S ROOM, June 20, '62.

Dear Sir.—No one person can take, under the Homestead Act, over a quarter section, and that he can take without any reference to how much land he owns, if he occupies and cultivates as required by law. But if he lives on less than a quarter section, he can take adjoining, provided that (which) he takes with what he has shall not exceed a quarter section. Your owning land in Kansas does not prevent your *settling on and cultivating* either an adjoining quarter section, or any other elsewhere.

Yours truly, G. A. GROW.

Settlements under the Homestead Act.—"J. C.," "H. W.," Melrose, will see by referring to our last issue that we advise the formation of companies, say fifty families or more, in making new settlements. This plants all the institutions of civilization in the wilderness at once. Get up such a company or join one already formed, if you move at all.

The Agriculturist and the Ladies.—"G. E.," Pa., says, a wife in his neighborhood threatened to leave her husband, because he talked of dropping the *Agriculturist*. He does not say how far from him the wife lived, but we have a right to guess. "Served him right." What sensible woman could be expected to keep house without our hints on household matters, floriculture, and our recipes?

Strawberry Exhibition—Explanatory Remarks of the Committee.—Our last number was a little delayed, and we were enabled to insert the *Awards* made by the Committee of Judges on the Strawberry Exhibition, reported upon more fully on pages 240 and 241, but we had no space for other remarks, which we here give. The hints will be of value to Societies offering prizes for similar exhibitions:

"The Committee appointed to examine the Strawberries exhibited at the office of the *American Agriculturist*, offer a few explanatory remarks. They have selected the Triomphe de Gand, as the best for general cultivation, and by this they mean the best for market. The best berry for market is the one which, for the time being, will net the greatest profit per acre, under good cultivation. This distinction the Committee believe, belongs at present to the Triomphe de Gand. But there is another prize offered for the best market berry. Now in the Committee's view, this prize also belongs to the Triomphe de Gand; but, being requested to do so, they have selected another popular kind, the Wilson's Seedling, but would state that they deem it in quality quite inferior to the Triomphe de Gand; it is, however, large, firm, very productive, and sells for a good price.

"The Committee would suggest, that on future occasions the list be headed with a prize for the best berry, quality alone to determine. A prize might also be offered for the best berry for the garden, and another for the best for the field, retaining the excellent feature of the present list, of a prize for the best dish of the leading kinds, which should come in, however, before the prizes for collections, so that the judges may select the best, whether in a collection or not, and avoid the anomaly of giving a first prize to a second class dish, as has happened on the present occasion. The Committee can not close without congratulating the Proprietor upon the good management and entire success of the exhibition, and expressing a hope that these exhibitions may be often repeated."

Poisoned Sheep.—"M. W.," East Taunton, Mass., says he has used butter forced down the throat with entire success for thirty years. The sheep are probably poisoned with laurel, though he does not say so. The oils are effectual remedies for some kinds of poison. Iris safer to extirpate the laurel.

The Rose Slug.—Whale oil soap, four lbs. to the barrel of water, applied with a syringe, is the best remedy we know of.

Butcher's Offal for Meas.—Nothing better to start laying. But it is almost certain to give eggs a fishy flavor, which, however, only persons of delicate taste will notice.

Butter from Scalded Cream.—"J. C. R.," Pittsfield, Ohio, has tried the method recommended in a former article with entire success. The method is, to put the cream into a dish set in a kettle of hot water.

Sour Milk and Preparation of Meal for Calves.—In answer to "S. T. L.," Dwight, Ill., we quote from Allen's book on "Domestic Animals:" "The milk should not stand more than half a day before feeding to young calves. As they advance in age, it may be fed rather older, but should never be allowed to become sour; nor should it ever be fed cold." Sour milk is neither natural nor wholesome for calves. To prepare meal for them, scald it, and add a small proportion of flax seed. Wheat bran or oat meal, with a little salt, added together with fine hay, is good food for calves after weaning, if pasturage is short.

Choked Cattle.—"J. E. W.," of N. J., says "seize hold of the tongue of the animal and give it two or three jerks, harder or lighter according to the age of the animal." Sometimes simply rubbing and squeezing, with a firm pressure, the outside, will remove the obstacle.

Some Dogs.—A farmer's daughter puts in a demurrer against our sweeping condemnation of dogs—because her dogs churn. For five years they have done the churning in a large dairy, saving a great deal of hard labor to the women of the household. Now that is sensible, and we glory in the dogs that work—and still more in the women that know how to get service out of them. We have never supposed that the Almighty made a mistake in creating dogs. They have their uses like other animals. A horse is excellent in the stable, but a poor parlor companion. A goat is very good cropping scrub oaks, blackberries, and brier roses, but we should not like him in the orchard, under the table, on the sofa, or in bed with the children. It is your sleek, useless parlor dogs, that we object to. A dog at a churn or grindstone, or what is better, under a garbage cart helping his master, we glory in. No more useless curs. "Your work, Mr. Cur, or your neck," should be the motto.

Dry Hay for Cows in Summer.—Cows sometimes get a surfeit of grass, especially in wet, warm weather, when the grass is succulent and rank. This feed distends the bowels uncomfortably. An armful of dry hay once a day, will serve to absorb some of this moisture, and benefit the cow in several respects.

Poultry in Indiana.—"C. G. E." Poultry can be sent to the N. Y. market in the winter season from points near railroads at a profit, if nicely fattened.

"The Market Book."—Mr. Thomas F. DeVoe, Butcher, in Jefferson Market, and member of the N. Y. Historical Society, appears as the author of a historical work of very great value. The first volume is a history of the public markets of New-York, with sketches of many of the principal butchers, from the earliest time down to some now living. Statements and descriptions are introduced, interspersed with anecdotes, so that one gains a very clear idea of the habits of the people, the laws of the city and the location of the markets; and in whatever has any connection with the sale of human food, the book is particularly full and clear. The history of public buildings, streets, squares, ferries, of the origin of now prominent and wealthy families, of the Revolutionary war, and of important civil and military events as successively they had a bearing on the craft, give to the work ever-varying interest. We have perused it with very great pleasure and instruction, and find everywhere evidence of great discrimination and accuracy. It has especial interest to the agriculturist, because not only the first introduction of neat cattle and small cattle into New Netherlands, is recorded, but changes in the character of market stock are noted, as well as record made of the most notable animals; and in a subsequent volume, in which histories of the markets of other cities also will be given, Mr. DeVoe purposes to discuss the ways in which various kinds of meat, and other produce, are brought to market, and to describe every article of food sold in the public market, the manner of its production and how it is prepared for sale. We are impatient for the second volume. The price of Vol. I. (large 8vo., 621 pages, and beautifully printed) is $2.50.

The Wheat Aphis.—Last year, at the East particularly, the Aphides, or plant lice, were very numerous on various kinds of grain, on cherry trees, etc. This year, while this continues in a less degree at the East, the West has been alarmed over large sections by the prevalence of the aphis in the wheat heads to an extraordinary extent. We have received 15 or 20 letters containing specimens of wheat heads thus affected. Some of the letters contained also other little, rough, dark colored insects with light bands, which we recognize as those devourers of plant lice, commonly called tigers. There is little to fear from the aphides, except when in immense numbers, at which times they greatly reduce the strength of the plant, and the grain does not fill. The damage done is not ordinarily perceived before thrashing, when the grain will be found lighter. We know of no cure, or defense against them. As they increase, the destroyers—ladybugs, tigers, and certain flies also—multiply, and will keep them in check.

Insects on Gooseberries.—"J. H. D.," Kansas. The insects described are probably red spiders.

The Bureau of Agriculture.—Isaac Newton, of Pennsylvania, Commissioner, and Richard C. McCormick, of New-York, Chief Clerk. This is the state of the case. It is our duty to our readers to announce the fact. We wish to say nothing more on the subject at present.

Parson Brownlow's Book is a narrative of personal experiences in East Tennessee, during the eventful year just past, with much collateral history and exceedingly interesting. 458 pages, 12 mo. Published by G. W. Child s, Philadelphia. Price $1.25.

A Pamphlet on Bee-Keeping, by Martin Metcalf, contains many valuable hints, some new ideas, and elucidates his method, and patent hive. 96 pages, 12 mo., for sale by Saxton, New-York.

Disease of Watermelon Vines.—"F. C. A.," Windham, O. We have no acquaintance with the white worm which seems to be the cause of the disease. The tow around the vine would be more likely to be effective if it were watered with liquid manure every day. Bugs seldom get the start of thrifty plants. Possibly a change of spot for planting the melons would remedy the difficulty.

Pine Leaves a Mulch for Strawberries.—"J. W. H.," N. H. We have no experience with this kind of mulch, but see no objection. Two inches in thickness, or even less, will be enough.

Russell's Seedling Strawberry.—Mr. George Clapp, of Auburn, N. Y., made a beautiful exhibition of this new, large, and finely flavored seedling, at the office of the *American Agriculturist*, on June 28. The berries were seen by most of our prominent pomologists, and many others, and universally admired. The berry is very large, scarlet, of fine flavor, excellent quality, apt to be hollow cored, said to be very prolific, pistillate. See advertisement.

Triomphe de Gand Strawberry.—"W. S.," Bordentown, N. J., thinks this the best of thirty varieties he has tried. His neighbors are digging up other varieties and planting with this.*

Lychee Nuts.—A new nut, or fruit, from China has recently appeared in our market, called Lychee. It is the fruit of the *Nephelium litchi*, and consists of a pulpy fruit surrounding a large hard seed, the whole en-

closed in a soft shell, consisting of numerous angular plates like the scales of an alligator, on a small scale. The pulp though dried considerably is very delicious.

Variety in Fruit-Growing is a matter of vital importance. Strawberries, perhaps, pay as well as any thing else, but the season only lasts three or four weeks. The same labor could be employed in picking raspberries, currants and blackberries, which come along in succession for two months after, when the Fall fruits are ready. Any one fruit is liable to fail, and a variety divides the risk. A fruit-grower who has a variety will ordinarily succeed better than one who makes a specialty of the strawberry. Of the latter fruit the Wilson's Albany, and Triomphe de Gand, are among the best well-tested varieties.

Strawberry Culture.—"E. B.," Poughkeepsie. The more thorough the preparation the better. Turn in the clover immediately. Use the subsoil plow, if the land is at all heavy. Manure after subsoiling, harrowing or plowing it in three or four inches deep. If the runners have been struck in thumb pots you may look for quite a large crop next year.

Profits of Fruit Growing.—"G. W. C.," Wings Station, asks what kind of fruit is most profitable, and what net profit fruits have been known to yield? It is difficult to give a precise answer to these questions. A gentleman in Delaware expects to get this season a crop of 50,000 bushels of peaches from about 120 acres. If he gets two dollars a basket his crop is worth 120,000 dollars, or a thousand dollars to the acre. As much as this is sometimes realized from fruit. But the next 3 years the same trees may yield nothing. In cultivating the small-fruits, from two to four hundred dollars an acre are not uncommon results.

Renewal of Strawberries.—"W. H. W.," Canada East. Strawberry beds will last a great many years, but most fruit-growers find it safest to renew after two full crops. The increased productiveness of the beds pays, and the ground is easier kept clean.

Cranberries from Seed.—"A. T.," Iowa. The objection to producing plants in this way is the long time it takes to get them into bearing. They will grow from seed in any moist loamy soil, but a plantation can be had much sooner from vines transplanted with care.

Cranberries on High Ground.—"E. P. T.," Mc. We have seen them growing in such localities, but consider it doubtful whether any will do as well there as on wet land.

The White Doyenne Pear is the old Virgalieu, which has generally failed at the East, except on the quince stock. The farther a pear or other fruit tree is removed from its wild state, the fewer thorns or other appendages of a native condition are seen. Hence a grafted tree has no thorns or spurs, while an ungrafted tree often shows them.

Catawba and Lenoir Grapes.—"F. B.," Wis. We have never heard of the Catawba turning black. The Lenoir is of nearly the same color with the Herbemont, dark-blue or violet, and for some time was thought to be identical with it.

Delaware Grape in Maine.—"E. P. T.," of Lewiston, Me., says this grape matured perfectly in open-air culture at that place.

Sweet-Sour Apples.—"J. E. Y.," Ohio, asks if there are apples sweet upon one side, and sour upon the other. We have eaten such apples. They are a sport of Nature, and not the result of any direct effort on the part of the cultivator to produce them. We have eaten splendid Northern Spy's grown upon the sunny side of the tree, and insipid specimens grown in the shade. The red cheek of an apple we think is of higher flavor than the other, which the sun has not kissed. In the sweet-sour apples, the sun has carried the joke a little further, and turned all the acids upon one side into sweets. Such trees are valuable only as curiosities.

Apples Preserved by Salt.—"G. L. W.," Kings Co., recommends packing apples in barrels that have contained salt, to preserve them. We want at least several experiments before we can indorse it.

Hardy Apples for Minnesota.—"J. O. E.," Goodhue Center, Minn. Apples from Canada and Northern New-England, will probably suit your climate. Fameuse, Baldwin, Roxbury Russet, R. I. Greening, are very hardy. It is quite possible that seedlings raised there may prove more hardy than any thing from abroad. The experiment should be tried. The location for an orchard or nursery should be well sheltered from prevailing winds by a belt of evergreens, if possible. Shelter alone will make a difference in climate of three or four degrees of latitude. The cutting back in August is a good plan, but a well drained soil is better, to ripen the wood.

Northern Spy.—"T. W.," of Canastota, says he has fifty trees of this apple set twelve years. In 1849 he had three or four bushels, in 1860 sixty bushels. He has kept the ground cultivated all the while with corn and potatoes, until last year when he seeded down. He says the trees need a good deal of thinning and high culture.

Plum Stock for the Peach.—"J. B.," of Richview, Ill. In England the plum stock is universally used for the peach. It is thought to make the tree more hardy, and to give it a dwarfish habit. If the wild plum is a free grower, peach orchards would probably do well upon it. We have never seen the experiment tried, but should have no doubt of its success in skillful hands.

Tar on Fruit Trees.—F. A. Jones, Ohio. If the tar was applied directly, it will be likely to kill them. Young fruit-growers frequently "get bit" in this way. The tar should be applied to a strip of stout canvas before it is put around the tree. The only remedy is to scrape off the tar if the trees are not already dead.

Budding the Peach.—"S.," Bradford Co., Pa. Any of our articles on budding in back numbers will convey the desired information. Single buds or eyes are the leaf buds. Any one who has ever noticed a shoot of new wood can detect the difference between a blossom and a leaf bud in a moment. The process of budding is so simple, that a child can perform it, after a little practice. See full explanation in July number.

Augers Quince.—"A. B.," Ill. This quince is cultivated principally for dwarfing pears. The fruit is not desirable.

Shortening-in Evergreens.—"G. W. C.," Wings Station. This will thicken the foliage to any desired extent. The Arbor Vitæ, Norway and White Spruces, bear the shears well. They can be trained to a perfect cone, or sheared into a hedge of almost any form.

Pruning Evergreens.—"H. D. C.," Florence, Mass. The best time is while they are making wood or just before. Hedges are usually clipped in May. The spruces we have shortened-in, in June. They should be pruned in the shape of a true cone, the longest limbs at the bottom. Each tier of branches should be shorter than the one below. If you shorten above it forces growth below. An evergreen stripped of its lower limbs is a deformity. Better cut it down and start a new one.

Soil for Nursery.—"Z. J.," Wis. Any good loam suitable for corn will make good land to grow young trees on. We have seen fine evergreens growing on reclaimed swamp. The soil should be well drained. Dry apple seed should be soaked in water before planting.

Hedge Plants for Gardens.—"H. A. B. C.," Kansas. A good hedge will of course take up some land, but it will make what remains very much more valuable for all garden crops. An evergreen hedge breaks off winter winds and enables us to cultivate fruits and flowering shrubs that would perish without their protection. The Osage Orange will probably do well in Kansas. We should prefer two-year-old plants, but would use four-year-old, if younger were not to be had.

Norway Spruce for Shelter.—H. Grundy, Ill. It will be much cheaper to purchase the plants than to try to raise them from seed. It requires considerable skill to get the plants through the first season, and special conveniences which only nurserymen have. The growth is slow at first, but rapid after the fourth or fifth year. Plants from one to two feet high are the most desirable for setting—those thick and bushy at the bottom. Small trees can be had for four or five dollars a thousand, but if time is any object with the cultivator it is better to buy a little larger and pay more. Not a root should be suffered to get dry in transplanting.

Early Sowing of Oats.—"J. L.," Pa., claims as results of this practice, stiffer straw, a larger yield, and heavier grain. He is quite right.

Hop Culture.—"L. M. M.," Port Covington. In the Summer of 1857, we visited the hop-growing districts in Otsego County, and gave a full description of the methods of culture and curing adopted there, for which see *Agriculturist*, August and September 1857. The practice of suspending wires from large border poles, and substituting strings for hop poles was then coming into use. The expense of furnishing a yard with poles was estimated at about two hundred dollars per acre. It was claimed for the wires that they were cheaper, and the cords saved much labor in handling poles. The hop-growing interest is very limited in comparison with other agricultural products, but shall receive its due share of attention.

Wheat in Utah.—"T. B.," of Great Salt Lake City, says ninety bushels of White Taos wheat were grown on a city lot, one and one quarter acres, a rich black loam, irrigated three times. Another man in Cache Valley raised 71½ bushels on one and one quarter acres. Seventy two bushels of wheat to the acre makes a "great country."

Sorghum in Minnesota.—A subscriber writes that eighteen gallons of syrup were made from cane grown on nine square rods in Morrison County.

Chess Again.—"J. A.," Ashtabula Co., O., says, he is in for the premium, and now knows just how to get it. He tried last season, but somehow, what he took for *chess* stalks, bore *wheat* heads, and concludes he did not sow in the right phase of the moon. He is now carefully watching the moon, and is so positive of it next year, that he wants the "shiners" kept for him, unless we will send him a few in advance.—Can't do it, friend Josiah, but will keep our bank account ready, to draw out that amount at any time.—Ed.

How many Pounds of Corn to the Bushel?—"J. S.," Tyre, N. Y. Previous to 1857 the standard weight of corn was fifty six pounds to the bushel. Two pounds were added by the legislature of that year which operates unfairly upon eastern farmers as their corn weighs more per bushel than the corn of the west which constitutes the great bulk of what is in the market. But the speculators not satisfied with this, demand, in some places, sixty pounds to the bushel, which is a still further shave upon the farmer's profits. Farmers should have conventions to protect their own interests and refuse to sell except at the standard weight.

Pedigree Wheat.—"J. F. H.," Lancaster, Pa., thinks this wheat very fine, a single head measuring 7 inches. It is very productive and later than the common wheat. Any notes throwing new light on the cultivation of farm crops will be acceptable.

Ground Bone Heating.—"T. L. H.," Wilkesbarre. Heating to the utmost, we should think, would release ammonia. Any strong acid would decompose the bone, and lime would increase the heat. We think if the ground bone were well dried before it was packed in barrels it would not heat. If the bone had any thing mixed with it, it would be difficult to fix the price.

Sumach Tannery Refuse.—"D. W. R.," Greenville, Ct. It will probably answer for mulching as well as other vegetable matter, and can not be worth much for manure, until it is composted. We should be glad to hear of experiments with it.

Liquid Manure vs. Muck.—"T. G. S.," West Brattleboro, Vt. It takes off the profits to cart muck two miles. The objection to carting the urine to the field is that it will not be done often enough to save its most valuable constituents. The moment the muck absorbs it, it is safe. If it lies fermenting in the vault a week or two, especially in warm weather, much of the ammonia escapes. If a cistern be attempted we should make a large one, mix water with the urine and apply it with a watering cart to grass and other growing crops.

Good Squash Seed.—L. L. Knox, Wis. The seed should be taken from a well ripened squash, should be well dried, and kept in a dry place.

Asparagus Bed.—Z. Cooke, Wis. If we could have the handling of the roots we should prefer the three-year-old roots to the seed. It takes three years to get a good bed from seed. If the old roots are not badly mutilated they would yield some cuttings the first season, and plentifully the second. Two-year-old roots are best.

Cauliflowers—Making them Head.—"A constant Reader" transplants them into the cellar in good soil in the beginning of winter. With an occasional watering they head finely.

Lilliputian Top-Onion.—"J. W. B.," Macedon, O., claims for this onion, that it is milder than any other, more uniform in size, more sure than the common seed. One pound contains about 8000 miniature

onions, and may be sown by hand or drill. These are important items, if further cultivation proves them true.

French Tree Tomato is a novelty yet, not thoroughly tested; but from last year's experience, we do not want it. It is not *tree* enough to stand alone.

Cotton in Kansas.—"G. L.," Snobny Hill, Kansas. The sample of cotton sent us is a very fair article, of "medium" grade, worth to-day 44 cents per lb. There can be no doubt that this staple can be grown several degrees further north, with profit at the present prices. Kansas is a good field for the experiment.

Preparing Chickory for Use.—"S. N. Y." Dig the roots with a potato fork, in the Fall, before hard freezing; wash and scrape them, and split the larger roots lengthwise, and cut into pieces 3 inches long. Dry in a slow oven or heated room until there is no moisture, avoiding scorching. Pack in bags and hang in a dry room until wanted for use, when the roots are cut into smaller pieces and roasted and ground like other coffee. Mix 1 part of the chickory with 3 parts pure coffee. We do not advise its general use, however.

Great Crops of Potatoes.—S. J. Wells communicates to the Country Gentleman the result of experiments with one half bushel each of five varieties of Mr. Goodrich's seedling potatoes raised in Onondaga Co., N. Y. They were planted on a rich loam of clay and gravel, with no manure, though the land was heavily dressed for tobacco two years previous. The tubers were cut into pieces of 2 and 3 eyes each, and dropped in drills 1½ feet apart in the row, the 22d of April. Some varieties occupied more ground than others, owing to a larger number of eyes. When dug they were perfectly sound, with the exception of a few of the "Copper Mine." The following results were obtained:

Copper Mine....	22 bush. at rate of	594 bush. per acre.
Cuzco.....	20 do	560 do	do
Pink Rusty Coat.	17½ do	475 do	do
New Kidney.....	15 do	400 do	do
Garnet Chili.....	14 do	378 do	do

Mangel Wurtzel Seed to the Acre.—"D. G. E.," Ill. The rule is four pounds of beet seed to the acre. We generally use a little more, preferring to have a surplus of plants.

Carrots as a Field Crop.—"R. H. S.," Pa. The seed is drilled in rows thirteen inches apart, if you use hand cultivation; thirty inches, if you use horse. The roots are stored without washing. Clean cultivation and manure are the secrets of success.

Potato Nomenclature.—"W. B.," Kansas. This comes appropriately under the work of Horticultural Societies. The names of most varieties are pretty well fixed in the East, and we are making progress in this matter every year.

Digging Machines.—The purchaser of the O'Reilley Terraculor invention, a large sized specimen of which machine was exhibited some time since at Rochester, Mr. H. C. Hepburn, of this City, has constructed one on that principle, but on a smaller scale than the one then exhibited, calculated for a single pair of horses. The teeth penetrate the earth to the depth of eight inches, and cut about twenty to twenty-two inches in width, leaving at least the surface in a light and finely pulverized condition; but it is yet evidently too hard of draft for two horses. Some changes will have to be made, we judge, to render the draft of the machine comfortable work for one span.

Recently another implement of this character, Comstock & Glidden's Rotary Digger, from Milwaukee, has been exhibited in operation in this vicinity. We saw it dig up heavy stubble ground to the depth of about eight inches and nearly three feet in width; its draft, also proved much too severe for one span of horses. The structure of this machine differs considerably from the other, and its effect on the soil differs also, in that it lifts the subsoil more, but does not leave the surface so finely pulverized. From what we have seen we are entirely satisfied that this method of tilling the soil may be made feasible and economical. Neither of these machines is perfect by any means, but a great advance has been made. We regard them with great favor and shall watch with interest their further development, but as yet would not like to express a decided preference between them.

The effect of Tillage on the Moisture of Soils.—"A. S. D.," Ohio, asks if new land will not make better pasture than that which has been plowed, and if it will not stand drouth better? There is a manifest reason why both these questions should be answered in the negative, even if we had no facts to sustain it. New land or virgin soil so far as it is richer, will, of course, bear more grass than soil often plowed and cropped. But if the soil were equally good, we have no doubt that the plowed land would bear the most grass. Plowing loosens and deepens the soil, and of course gives a deeper pasture ground to the roots of grasses. This loosening of the soil gives freer access to the air, which imparts moisture and guards against drouth.

Horse-Hoes.—"S. H. B.," Newtown, Conn. Shares' Patent is one of the best. They are generally lighter than the cultivators, and work admirably in smooth land. The agricultural stores at Hartford, New-Haven, or at Bridgeport, will probably furnish them.

Angle Worms.—Mr. L. R. Murray, of Jefferson Co., N. Y., wants to know if a *very large number* of angle worms in a soil, originally clay, but worked and manured so long as to be tolerably mellow, effect any injury; and if so, what is the remedy? We have never seen any evidence of serious injury effected by them. It is even thought that their presence is advantageous to the soil, by rendering it more porous, and otherwise making it finer and better.

To Prevent Wall Paper from Fading.—A Connecticut subscriber recommends a lump of alum as big as hen's egg dissolved in 6 quarts of paste.

A Short Method with Night Caps.—"H. H. B.," Wis. Aunt Cinda's method is to tie a knot in each of the opposite corners of a handkerchief, about two inches from the end. Put it on the head one knot before, and the other behind, and tie the other two ends under the chin. Look in the glass and keep from laughing if you can. A shorter method still is to put a not before the whole kerchief instead of *knots* in the two ends. We eschew night caps and dogs. A clean head makes a clean pillow case. Soap and water at the roots of the hair are better than cotton at the other end. Keep the head cool.

Why Grease Bread Pans?—"Eunice," of Columbia Co., Wis., does not see the utility of the almost universal practice of greasing bread pans before baking. She does not do it. In the multitude of counsellors there is wisdom. Who speaks? Many people bake the bread on the oven-bottom, sprinkled with ashes, and some to the ashes, or instead of them, add flour and caraway seeds. Such use no grease.

Rancid Butter is said to be cured by mixing soda with the cake or cookery in which the butter is mixed. We doubt the cure and still more the wholesomeness of the compound. Fresh butter, if you please.

Medicine for Summer Complaint. J. L. Holmes, Bristol Co., Mass., says, steep rhubarb root in water, add molasses, and boil to a syrup. If the patient is weak, add a teaspoonful of brandy to a teaspoonful of syrup, and give a teaspoonful 2 or 3 times a day.

Drying Sweet Corn for Succotash.—"J. F. H.," Lancaster, Pa. We know of no good oven or furnace expressly for this purpose, and one is hardly needed for preparing family supplies. Where a business is made of drying apples and other fruits they have an apparatus expressly for the purpose. For the family a bushel or two may be dried with the common stove without any difficulty. The corn is boiled slightly in its milky state, scraped or cut from the cob, dried a day or two upon sheets in a bright sun, carrying them in at night, and then finished off in a brick or common stove oven. No family should be without a full supply of this article. Succotash once a week is wholesome, economical, and "not bad to take."

Rain in England.—From tables kept in London, England, we find the amount of rain which fell in 1861 was 20.7 inches; the average fall there is 25.4 inches.

Climate of Washington Territory.—J. H. N., a citizen of that region says: "The climate is much milder than in the States. The farmer can work half of the time in the winter season. I have left potatoes in the ground and found them uninjured in the Spring. Cattle need very little foddering in winter. Corn yields about forty bushels to the acre, wheat the same, and potatoes five hundred bushels; other grains in proportion."

"Electric Weather Glass, or Storm Indicator."—J. S. Fish, Grafton Co., N. H.—Just to test this instrument, advertised by Lee & Co., we obtained one. It is a glass vial attached to a strip of metal, containing camphor dissolved in alcohol and water to saturation, which is sometimes clear and limpid, and sometimes cloudy or in a crystalized state. It is an old philosophical toy, but after long watching we can trace no direct or uniform connection between the condition of the fluid and the subsequent state of the weather.

Plants by Mail.—"H. L. S.," Provo, Utah. Any thing under eight ounces may be sent by mail. This will include all the small fruits, and some of the large ones. The better way probably will be to send to St. Louis, for such plants as can be had there of the nurserymen, and for the rarer plants to some Eastern nurserymen or florists, who have or can procure almost any plant desirable, and can forward it in the best way. The selling of seeds and plants is not our business.

The Word "Balance," in the sense of remainder, is derived from counting-house usages, and is not so strictly incorrect as inelegant.

"The Freedom of the City."—"M. E. M." asks: "What is meant by granting the freedom or liberty of a City to an individual, as an expression of great regard or esteem, by its citizens?"... It means very little in this country, nothing in fact but a compliment. In the olden time it conferred certain valuable privileges and immunities; and making a man a citizen, endowed him with certain profitable rights. It was often granted in order to induce men of reputation in science, letters, or arms, to make the city their residence; and in Europe it is even now so used. Thus, as one of the inducements held out to Baron Liebig, to take up his residence in Munich, "the freedom of the City" was voted him, and we suppose he became for life one of the City corporation.

Snow in Utah.—"T. B.," informs us that the snow in the mountains there was 34 feet deep in April, and men had to go on snow shoes to free telegraph wires.

Silk weed a Substitute for Cotton.—"N. J.," Grand View, Ind. The downy material within the pods of milk-weed or silk-weed has been used for paper making. We do not think cotton is likely to fail, or that the question of substitutes has any practical value.

Cotton from the Balm of Gilead.—"W. A. M.," Pittsburg. It is not a freak of nature, but one of her provisions for scattering the seed. It does not appear until the tree is old enough to bear seed. It would undoubtedly make good paper, and perhaps serve other economical purposes, but at present it would cost more to gather it than it would be worth. It belongs to the genus *Populus*, which also embraces the cotton wood of the western rivers, which is named from the cotton it sheds when the seed is ripe. We do not share the apprehensions of many that the southern supply of cotton is about to fail.

About Cork.—(Inquirer.) It is the outer bark of an evergreen oak, growing chiefly in the countries bordering on the Mediterranean sea. It is sometimes cultivated further north, as a curiosity. When about 15 years old, the bark is cut off in strips; and afterwards crops may be taken off every eight or ten years.

The Aquarial Gardens in Boston, —long famous as a place of public resort, have passed under the management of Mr. P. T. Barnum, who purposes to make them still more interesting and instructive.

Horse-Racing at Fairs.—A good thing to remember. In the case of a suit brought against the Monroe Co., (N. Y.) Agricultural Society, to recover a premium offered for fast horses, which suit was carried to the County Court, it was decided against the plaintiff, on the ground that "all running, trotting, or pacing of horses, for any bet or stakes, in money, goods, or other valuable things, or for any reward to be given the owner or rider, for any animal which shall excel in speed, is racing, and racing is unlawful."

Farmers' Clubs.—"E. A. H." Granby, Conn., wrote thus some time since about the farmers' club in his neighborhood. "We hold fortnightly meetings—by invitation of members, at their residences. We take our wives or daughters with us, spend the evening in discussing some question pertaining to our occupation, previously proposed—the ladies occupying the parlor with the hostess; closing early after partaking of cake, fruits, nuts, etc. We separate with parting salutations, exchanging assurances of being present at the next meeting. Although a scattered community, we collect in goodly numbers every other Wednesday evening, and enjoy a social interchange of views on some important question of agriculture or horticulture, get better acquainted, become more attached to our occupation, and to each other." This is a model club. Farmers, follow on.

Turnips—The Last Chance.

It is one of the excellencies of the turnip, that it is always in order, from May to September. We have sowed turnips as late as the 1st of the latter month, and got well paid for the labor. Any spare patch of ground, where other crops have failed, or have been removed, may be turned to good account by sowing turnip seed. Turnips come in, as a substitute, for many other crops, and a smart farmer may even now make up a deficiency in hay or grain, by the aid of turnips. And it is worthy of notice, that dry Summers, which pinch those crops, are usually followed by wet Autumns, which are very favorable to turnips. There is a special reason for making the most of this crop the present season.

The demand for grain and breadstuffs is likely to be unusually large. Not to speak of the foreign market, there will be a great demand at home. The operations of the war must have diminished the product of grains somewhat in the North, and still more in the South. With all the efforts of the Confederate Goverument to secure an increased supply of breadstuffs, at home, it is not likely that the South will produce as much grain as usual. Every plantation has felt the excitement of the times, and it is impossible, under such circumstances, to get the usual amount of labor from slaves. Our advancing armies have found destitution in many places, and there is, doubtless, much more that has not been heard of. There can not fail to be a very great demand for provisions in the Southern States, as soon as they are thrown open again to commerce. It becomes us, then, to make the most of the season that is left us, in raising all the turnips we can. The hay crop is short in many parts of the North, and turnips will save hay. They will also save grain in feeding pigs, sheep, horses, and cattle. They will make mutton and wool, beef, and pork.

The White French, and the Sweet German, or Rock Turnip, may be transplanted still. They will grow as readily as cabbage, and make a fine crop. There are yet a hundred days before the frosts will injure them. A little bone-dust, or superphosphate, will give them a start.

For broadcast sowing, in the corn and potato fields, the strap-leaf, cow-horn varieties are excellent. We have grown them at a cost of four cents a bushel, and at this price they are cheap feed for all stock that relish them. Improve all the waste patches in the field and garden with a sprinkling of turnip seed.

Washing Carriages and Wagons.

It is a great annoyance to have a nicely painted carriage scratched by careless or ignorant hands in washing it. Yet how often is this done! A broom and pail of water sometimes constitute the whole equipment; possibly, an old rag is throw in. The broom or rag is wetted, and dashed on the smooth surface of the vehicle, and the scrubbing proceeds, until the mud is washed off, and some of the varnish and paint, beside. Now, the right way of doing this is very simple. First of all, give the mud a thorough soaking with water, when water from a hose can not be used, using a common garden syringe or sprinkling-pot. Soak it again, and not a little of the mud will run off without any rubbing. With the surface thoroughly saturated, begin with a large sponge full of water, wash gently, depending still more upon the water than the rubbing. A large, soft cloth will answer, if a sponge can not be had. After the mud and grit has all been washed off, give it another sprinkling or two, and after taking off the excess of water with a soft sponge, rub the whole clean and dry with a piece of soft chamois leather. See that this is perfectly free from grit or knotty places. It will remove lint and dust, and leave the varnish clean and brilliant.

Domestic Guano.

It is an old story, we know, but one which will bear repeating, that farmers should take all possible pains to make the best use of their home manures, before buying any foreign fertilizers. Take the single item of hen-dung. It is one of the most powerful fertilizers in the world, for the reason, chiefly, that it contains the liquid and solid excrements together. Prof. Norton says: "It is found to be particularly rich in nitrogen, and also in phosphates. The manure of pigeons, hens, ducks, geese, and turkeys, is very valuable, and should be carefully collected. The amount to be obtained from these sources may be thought so insignificant as to be unworthy of notice; but it must be remembered that three or four hundred pounds of such manure, that has not been exposed to rain or sun, *is worth at least* 14 *to* 18 *loads of ordinary manure.*"

Of course, this dung should not be applied to plants in its crude, concentrated form—it would kill seeds or roots at once. The true way is to place the roosts where the droppings can be gathered up. Then sprinkle the floor beneath with charcoal-dust or gypsum. Where these are not convenient to be had, prepare a heap of dried muck, well pulverized, and spread it under the perches twice a week. Shovel and sweep up the whole mixture once a fortnight, and put the same in barrels. Pursue this plan until near planting time. Then empty your barrels on the barn-floor, and mix the heap with more plaster, ashes, or muck, so that the hen-dung will finally be about half of the mixture. Dampen the compost a little with water, cover the heap with old mats, and let it lie until wanted in the field. Apply it to corn at the rate of a gill to a hill; but be careful to cover it with a little earth before dropping the seed. Use it also at the same rate for potatoes, mixing it a little with the soil at planting. It may also be drilled in with wheat, using it, however, in almost as moderate quantities as guano. If barnyard manure is also used broadcast, ten bushels of this fertilizer will be abundant for an acre. It would richly pay any farmer or gardener to buy hen-droppings at half a dollar a bushel. Certainly it is unwise to give them away, as some do, to the tanners.

So with other home-made fertilizers. Some sort of absorbent should be kept constantly on hand, and nigh at hand, convenient for use at all seasons of the year. Dried peat or muck, coal-ashes, saw-dust, chip-manure, tan-bark,—all will answer a good purpose. Throw a little, once a week, into the privy-vault. It will keep down all unpleasant odors, save the waste of urine, and make the bulk of material double in quantity and value. When the time comes for the annual cleaning out, Patrick will not make up a wry face, at all at all. Mix the contents with as much more of common soil, and in the course of a few months, we shall have a large pile of excellent, safe and not offensive manure.

Few persons are aware how much can be accomplished in a single year by saving and using the slops of kitchen and chamber. We know of more than one man, who, on hiring a village house and garden, with the soil nearly worn out, has made it quite productive, chiefly by this simple means. One of these pursued the following course: Not being able to buy much manure, he placed a tight barrel near the kitchen door, where it could receive daily offerings from up stairs and down stairs, and weekly gifts from the wash-tub. Every night, in Summer, on returning from his shop, Mr. K. took pail and watering pot, and scattered the rich slops between his rows of cabbages, beets, potatoes, beans, etc. The rains fell often enough to dilute his liquids. In the fall, it appeared that his worn out ground yielded better than that of his fore-handed neighbors.

Our advice would be to dig a pit somewhere in the rear of the dwelling, wall it up with slabs, plank, or brick, and conduct all the slops of the house into it through a drain. Into this reservoir, cast, from week to week, all manner of absorbents. When the pit is filled, it will be worth a good deal of money. But let each man take his own way of economizing. Only, let *some* plan be pursued of saving all the refuse perishable material about a place, and converting it into manure. This is the way to fertilize land, and to feed its occupants.

Tobacco Cultivation—No. VI.

We are forced to be quite brief in our directions for the culture of tobacco. The season has arrived for the most vigilant, watchful care of the Tobacco crop. The leaves are so far matured that the worms, if they have any chance, do great damage before the owner knows it. The tops are running up, and yet are too weak to sustain high winds—as the stalks are brittle.

Topping should proceed at once, or as soon as the plants attain sufficient hight. It is difficult to lay down precise rules for topping tobacco, yet the judgment of the cultivator can hardly lead him far astray. The hight at which the flower stem is broken off depends upon the general vigor of the plant, and the size of the leaves. The size of the leaves rapidly diminishes in the Connecticut seed-leaf variety after the 12th to to the 16th leaf on thrifty plants, and such are usually topped 2, or at most 3, feet from the ground. Plants of less vigor should be topped lower;—the farmer using his judgment as to how many leaves the root will perfect. The later the season, the lower should the plants be topped, as it is the more necessary that the whole energies of the plant should be directed to maturing a few leaves.

Of course, all those various circumstances which affect the growth of tobacco, affect also the hight and time of topping. When this is done, no more leaves grow; but those left, especially the upper ones, feel the influence at once, and grow most rapidly, and if the weather is favorable, very soon ripen. Meanwhile the buds in the axils of the leaves push with almost inconceivable vigor, and must be pinched or broken out as fast as they grow, so that all the sap shall go into the leaves. As they ripen, they become turgid and brittle, with swollen veins and tissues apparently bursting with sap, very different from the soft pliability of a young and growing leaf. Tobacco growers, at the North at least, usually top their plants when the stalks begin to run up rapidly and branch, breaking them off at the 3d or 4th leaf below where it branches. This is about 2½ to 3 feet high. Remember, one frost will probably make a finish of your tobacco, therefore leave no more leaves than will ripen before frost. The leaves are very brittle, except in the heat of the day.

The Agriculturist Crop Reports.

Breadth, Present Condition, and Prospects of the Principal Crops, Gathered from 1,500 Reporters in 24 States and Territories.

Our reports for July 10th, show an exceedingly favorable condition of the crops over the whole country. There will be no failure of any of the small grains, nor does the present prospect indicate any serious falling off in the amount of the corn crop. Of course this crop depends much upon the weather of September, and the holding off of frosts. We have had so much cold weather, and the season was so late, that we have almost a right to expect a late Autumn, and good ripening time for our great cereal.

CORN.—There has been from the first some cause for anxiety in regard to this crop, but the recent hot weather has brought it up very rapidly, and reduced greatly the chances against our having a full crop. There are sections where the last year's crop is still on hand in considerable quantity, and where there has been considerable less planted than usual, but in general, where there has been any diminution in the breadth of corn, the introduction of Sorghum more than makes it good. Upon this crop depends our supplies of *Beef and Pork*, and those of our readers who have expressed their regrets that we have not included these in our statistical tables of crops will see, if they consider, that not only the *price*, but the *quantity* of pork and beef put into market, has a direct relation to the price of corn. This depends upon its abundance and the condition in which it is secured, that is, its fitness for transportation. The number of cattle or swine in any one district at any particular time, has very little to do with the supply or the price, except late in the season, when the corn crop has been chiefly converted into beef and pork, and of course, we except also the prevalence of wide-spread epidemics, which might, and in all probability would, seriously affect the market both for corn and meat.

The Corn crop of the West is represented as just about as promising as usual. In Illinois, Wisconsin, and Michigan, and some other States, there are fears of a short crop, a falling off of 10 to 20 per cent being the estimate; but in Ohio, Indiana, Minnesota, Pennsylvania, and New-England States, on the whole, the appearance indicates a full average or even above, and a little more than the average breadth planted. In New-York and New-Jersey the corn looks poorly, and is estimated at considerably less than average.

WHEAT.—The weather during the wheat harvest in the great Western States, and we may include also the Middle States, has been, up to our last accounts, prevailingly very fine, so that the crop is well secured. Throughout Ohio our reporters seem to be in a real state of ecstacy over the crop, and mark it from 20 to 300 per cent better than common, the average being about 56 per cent for the whole State.

In Indiana farmers seem to entertain very much the same feelings, and the average in this State is about 44 per cent better than common; while in Illinois it is 30 per cent. This, of course, settles the matter with regard to this crop. And although we must say, we think, in the excitement of satisfaction in so good a crop, and such fine weather, several undoubtedly have considerably over-rated the crop, and thus raised the average of our returns, still it may be put down as a considerably larger crop than usual, throughout this wheat-growing region.

SPRING WHEAT has been considerably damaged, and averages a small crop in many localities in Wisconsin, Iowa, and Minnesota, where comparatively little other wheat is grown. In Minnesota the crop is better than in the other States named, and a full crop may be anticipated, if it be well harvested. At present our reports from other districts run fully 15 per cent below a fair average. Still the breadth sown, as compared with last year, will almost, if not quite, make up the deficiency.

RYE.—The crop, so far as reported, and we have full reports of that part of the country where it is most cultivated, is fully up to average.

OATS have been affected by the rust somewhat, and in some sections injured by the aphis. The weather was unfavorable at the time of sowing and in May, which this crop never recovers from. The crop will therefore be light.

HAY AND FORAGE CROPS.—The Hay crop at the West is remarkably good, and well secured. In Pennsylvania it is represented as nearly 20 per cent above average. In New-York, however, it falls nearly as much below, and in the Eastern States about 9 or 10 per cent short of a full crop. The drouth in Northern New-York and New-England has greatly affected this crop. Many of our reporters include Hungarian grass and sowed corn with the hay crop, which is right, as they take the place of it entirely.

BARLEY.—We have reports from Ohio, Wisconsin, Michigan, Pennsylvania, Maine, New-Hampshire, and Vermont, which represent the crop hardly as favorably as last month's report, though, on the whole, better than average.

SORGHUM.—So far as we can now judge of the crops, the prospects are quite as good as usual. The average of the reports puts it about 3 per cent above a full crop. The breadth it will be remembered is two or three times that of any previous year.

FLAX is reported as remarkably good, with greatly increased breadth. The reports we have put it more than 12 per cent *better* than usual, and the amount sown at fully double.

TOBACCO.—We have few reports, but hear no complaints, except that it is a little backward.

BUCKWHEAT.—It is still too early to report much about this crop; we hope for fuller reports next month.

PEAS AND BEANS.—The demand for these for the Army and Navy has induced a much larger breadth to be sowed than common, and except where they have been injured by the drouth in northern New-England, they look very promising, averaging several per cent better than usual.

FRUITS—Still promise well, though many apples have dropped in some sections, still, more than an average crop is left.

Crop Prospects in Europe.

LONDON, *Tuesday, June 24, 1862.*

A question of much interest to farmers and many other classes, both here and in America, is the condition and prospects of the growing crops, especially of the great commercial crop, wheat. I have recently passed through the Northern part of Wales and Ireland, across the Southern part of Scotland, and about 400 miles down through the inland agricultural regions of England. During this trip, every opportunity has been availed of to learn from personal observation, and from constant inquiry of farmers, the condition of the growing crops. During the past week I have also met and conversed with many agriculturists from different parts of the Kingdom, who are drawn here by the great show of the Royal Agricultural Society. The conclusion I draw from all these sources of information is, that a much larger area of wheat was sown last Autumn than usual, at the expense of the usual area of Spring crop. But there is now much anxiety as to the effects of the continued rains. I was prepared to find much more rainy, and damp, foggy weather here than in America, but during two weeks past I have had but few glimpses of the sun, and Sunday last was the only day in which my umbrella has not been used to shed off falling rain. The crops here may have become, in a measure, "acclimated" to this daily shower bath, yet the effect of so much damp weather can not but be detrimental. All are hoping that clear skies will come in time to allow the wheat heads to set and fill out well, yet it is evident that there is much anxiety, and no one claims to hope for more than average yield, notwithstanding the large area sown. The markets are a pretty certain indication of the general feeling and expectation, and, as the commercial reports will inform you, prices of wheat and flour have been advancing here for several days. The recent advices from France and other parts of Europe, and by telegraph up to to-day, report severe rain storms in some places, and drouth in others, with a general expectation of a moderate, if not deficient, yield of wheat. The stock of old grain, at the close of the present year, will of course, be very small. I have therefore, little hesitation in predicting that there will be a continued foreign demand for American breadstuffs after the next harvest here. O. J.

Royal Agricultural Show, etc.

Since the letter from the Editor on page 236 was printed, a note from him has been received, from which we take the following extract. We find room for it here, though it might more appropriately follow the letter referred to, as a postscript: "You will see that no prize is given to the superb Short-horn Bull "*Lord Oxford*," bred by Samuel Thorne of Dutchess County, N. Y., and exhibited here by the Duke of Devonshire. In *my* opinion he is the best animal among all the splendid collection of 250 Short-horns gathered in Battersea Park as competitors for the Royal Society's prizes, and as a set-off to my national partiality, I may add that the same opinion was freely expressed by many good English judges on the fair grounds. Though in flesh enough for the purpose for which he is kept, he is not so fat and sleek as some other bulls in the same class, (those above 3½ years old). Plumpness, i. e. fatness, seems to be one of the requisites to secure success at the English as well as at many American show grounds.

The display of animals is probably the largest and best ever gathered into one place. I send herewith a summary of the entries from Great Britain."

Short-horn Cattle of all classes			250
Devon	do.	do.	66
Hereford	do.	do.	97
Ayrshire	do.	do.	70
Jersey, or Alderney	do.	do.	22
Various other breeds	do.	do.	177
			682
Horses of all kinds			285
Sheep—number of entries of all kinds			642
Pigs	do.	do.	194
			1803
Entries of Stock from the Continent			183
Total entries of all kinds			1986

[Total number of animals shown, about 2,400 or 2,500.]

PISAN BULL AND OXEN OF THE VAL DI CHIANA.

Engraved for the American Agriculturist.

We are in the habit of regarding the existence of certain "points" as essential to the value of domestic animals, according to the uses for which they are bred, whether for labor, food, milk, or wool, etc. The practised eye of a dairyman demands certain points in a dairy cow, and that they are likely to be perpetuated in her calf. The breeders of working cattle seek the development of different points from those sought where beef or milk is the especial desideratum. In England, whence we derive our notions of neat cattle, the most systematic breeding has been pursued with reference to flesh-production, breeding *out* bad points, and perfecting good ones, so far as possible. The Shorthorn has been brought very near perfection as a beef animal. The heavy neck and dewlap has disappeared; the hind quarters, especially the loin and rump, have been proportionally increased; and, in fact, the animal which we now consider so nearly perfect is very far from it, if we regard him as God made him—to take care of himself and his herd of cows, to fight their battles, and be the flock leader and master. We give above a striking picture of animals bred with great care, but not for beef. The bull, in the foreground, is of the somewhat noted Pisan breed of Tuscany,—large of stature, heavy and powerful fore quarters; hind quarters showing activity, but lacking beef qualities—evidently a bull to fight, and to work! Two such animals opposing one another would lay out a vast amount of strength, if pushing with locked horns. The whole force of the bull of such a build is concentrated in his forehead. This is most obvious when the attitude, position of head and play of muscles is observed in such an animal in the act of pushing, fighting, or laying out strength in that way. Among that macaroni-eating people, though beef is valued as food, they are content with what nature furnishes, fat in one place, and lean in another—good strong beef; the tender-loin perhaps is all the more valued because there is little of it, and the neck-pieces are probably regarded as so much clear gain over the thin necks of British cattle, while the larger the bones the more soup they will make. Work is what is wanted, and beauty of color—weight of bone, and grace of motion so far as it is not inconsistent with strength, are sought in addition. The result is the production of animals very much of the wild or uncultivated type, as any one will see from the picture. The oxen of South America, Africa, and India, have a similar look. All these wild bovine races tend to great weight in the fore quarters.

The oxen are of the large cream-colored breed of the Val di Chiana, in Tuscany. They are bred with great care, and are of a uniform color throughout, and the breed possesses similar characteristics to those just referred to, heavy fore quarters, deep brisket, full dewlap, light loin, etc. They are very powerful draught animals, fatten rapidly, and the beef is good.

These animals are broken to draw by the head, as the pad across the forehead indicates, and this is indisputably the true way for all neat cattle. The whole shape of the animals shows it; all the muscles of locomotion concentrate their power as it were in a focus at the forehead. To make them draw by the neck is a refined sort of cruelty, to which the poor beasts in this country are thoroughly accustomed, and we have no doubt that nearly half the power of the ox is wasted, as a general rule.

South-Down Sheep.

The sheep is a triple source of profit to the farmer, as mutton, as a wool-producer, and as a manure maker, not to include its value in clearing land of certain weeds and bushes, which are very difficult otherwise to eradicate, which may be fairly reckoned among the profits of sheep-culture. The value of the manure made by sheep depends upon the quality of the food; there is no difference in breeds. There are, however, great differences between breeds in regard to the quality and abundance of the wool, their rapidity of growth, and both the excellence and the quantity of their flesh. We may, therefore, raise sheep chiefly for wool, chiefly for mutton, or for both combined, and it depends upon the markets, the part of the country in which the flock is to be kept, the size of the flock, transportation, and many minor matters, which course is most profitable.

It is not our purpose now to discuss the relative advantages of various breeds, but mention this to show the true position of the South-downs. It is eminently a mutton breed, while the wool product is a source of quite as much profit, at present prices, as that of ordinary fine wool sheep. The South-downs are classified as middle-wool sheep, the fleece being neither coarse nor fine, long nor short, and it is exactly that kind for which there is the greatest present and prospective demand. Relatively the fine wools find a particularly poor market, and within the year they have sold and been used for the same purposes as wools of very much inferior grades. The weight of the fleece of a good South-down is so much greater than that of Merinos or Saxons, that the difference of no more than 10 to 15 cents in the price per pound turns the balance of profit in favor of the lower-priced wool. It is, however, as mutton sheep, in which it has no superior for quality and profit combined, that this beautiful breed has its chief claim to consideration.

The long and careful breeding of JONAS WEBB, of Babraham, England, was attended with such marked success, that it is on all hands acknowledged that he brought the mutton points of the breed very near perfection. Mr. Webb became an old man, his flock was in splendid condition, its reputation could not be higher; he had, besides, become so famous over the whole world, that it was necessary for him to entertain a great deal of company, both friends and entire strangers, and there was no one to whom he could entrust the care of his flock while he, in partial or entire retirement from business, sought that repose which he felt he needed. He therefore

offered his entire flock, except the lambs, for sale, which sale took place on the 10th of July last year, and the lambs were sold on the 20th of June, this year, and thus this worthily famous flock was dispersed.

RAM-LETTING.—The system of ram-letting has been followed with great success in England, offering, as it does, great advantages both to the owner and hirer:—To the owner, because he does not lose the services of rams, whose good points he may wish to perpetuate in his flock, while at the same time he is well paid for their services; to those who hire, because they are thus enabled not only to gain, at reasonable cost, infusion of new blood, but they may select, from among many, those possessing such points as their own flocks may be deficient in, and so, in consecutive years, very greatly improve their flocks in all desirable particulars. This system has never been pursued to any considerable extent in this country, but we are gratified to know that at the approaching sale of rams and ewes advertised by Mr. Taylor, of Holmdel, N. J., this is to be a prominent feature. Mr. T. has a number of rams of such excellent points, and of such noted parentage, that he is unwilling to offer them for sale at present, but proposes to let them for the season.

THE FARM AND FLOCK OF MR. J. C. TAYLOR.

This flock gained a wide celebrity after the Babraham sale, last year, from the fact that Mr. T. became the purchaser of several of the best animals of the herd, and particularly of one, the best ram of Mr. Webb's flock, "No. 89," for which, as we reported at the time, the great price of 260 guineas, or $1,300, was paid. It is well known that Mr. Taylor has for years been the owner of a most excellent flock of South-downs, which, year after year, he has been improving by introducing the best blood of Mr. Webb's flock. His own sales have been quietly made chiefly to California, and distant parts of the country. In fact, up to the time of his own purchase of the $1,300 ram, he had sold one for the highest price that had ever been paid for a sheep, ($1,000). We found his large flock of sheep in most excellent condition, and more than answering our expectations. There are but few which are not of the Webb South-downs, either imported animals, or their descendants, and showing great uniformity in size and general character. The sheep enjoy excellent pastures, good sheds, and careful watching and attention, but there is not the least attempt at show about the flock or the farm.

Holmdel is situated in the county of Monmouth, N. J., in the northern part of the green-sand-marl formation, and this wonderful fertilizer underlies the whole of Mr. Taylor's farm. A stream passing through it, exposes the deep beds on either bank, while a good part of the bed of the stream seems to lie in the same deposit, the very pebbles of the brook being the belemnites and shells of the marl. With this manure always at hand, in condition to be immediately applied, free from weed seed, good for any crop, and requiring no especial care in the application, it is no wonder that this portion of New-Jersey teems with fertility. We must say, however, that it leads people to neglect other manures, and the piles of corn-stalks and other material for composts, unused upon the farms, look badly to the eye schooled to regard this as evidence of negligent farming. There are a good many lambs raised here for the New-York market, and since the introduction of South-downs, and the use of bucks crossed upon common ewes, the lambs are much sought after at high prices. Mr. Taylor's neighbors, however incredulous at first, now unite in placing very high estimation upon this breed, and they would be very loth to part with the use of the rams.

The offer of several of the very choicest of his lambs, to be sold at his approaching sale—one only, which he considers the best, being reserved—is, we are sure, after seeing the stock, *bona-fide;* and we consider it due to our readers to say, that the opportunity is one the like of which has never been offered in this country to obtain sheep of this breed, and indeed better South-downs can not be bought anywhere in the world. Many sheep of Mr. Taylor's own raising are fully equal, and in some cases superior to the imported stock, except in the case of one or two of the Webb bucks, which seem as near perfection as a sheep can come. It is very interesting to compare the present perfection of the South-down with the form considered excellent in animals of this breed a few years ago, to see how the chest is deepened, the girth expanded, the loins widened, the length gained in the rump, the gain in the neck, the breadth of the back, etc. So gratified were we, that we esteem it a privilege to commend this noble breed and Mr. Taylor's sale to the attention of our readers.

"Pleuro-pneumonia," or Lung Murrain in Neat Cattle.

This disease, at present unknown at the West, with us at the East is so far *naturalized* that we believe it may break out in almost any herd situated on any important thoroughfare, or in which there are working cattle which go upon the highway. Still there is as yet but very little of it. The vigorous measures pursued in Massachusetts and other New-England States, to a certain extent checked the evil, and the existence of the disease at other points along the sea-board where ship cows have been bought, though frequently recognized, has not given rise to extensive disaster. We have no doubt the disease may be suppressed, wherever it breaks out, by the perfect isolation of the herd, and the slaughter of every animal of it; not as was done in Massachusetts, killing and burying every animal; but by putting the cattle under treatment until they are cured and fattened, when they may be slaughtered; the flesh will be good food, and the hides good leather, and no danger need be apprehended to other stock, after the barns and stalls have been thoroughly whitewashed and limed, and aired for some time. We saw the disease as it existed in Massachusetts, and were fully convinced of its intensely contagious nature. The fact that of the hundreds of cattle slaughtered in North Brookfield and vicinity, there was not a single case where the contagion could not be traced directly to the imported Dutch cow of Mr. Chenery's herd which arrived sick, is abundant evidence;—that is, directly to that cow through several others by which the disease was conveyed. And again the fact that at a certain house-moving in that town, where 24 yokes of cattle were used in one "string," one pair of these, having contracted the disease from a calf brought from the originally infected herd, though not showing it, still communicated the disease to every one of the 23 other yokes, not a single one of them all being found which did not give evidence of the murrain.

The disease exists in Brooklyn, N. Y., and in New-Jersey, and in some places on the Hudson River where cows from the distillery stables have been taken. Vigorous means need to be taken to control it. The States should act, and so should individuals. It is a great crime to sell an animal supposed to be infected, or to keep such a fact or supposition secret. We need educated veterinarians. A few are in this country; however there are hundreds of quacks to one who knows his business.

In a paper which discussed this subject in "Wilkes' Spirit of the Times," by Louis Brandt, veterinary surgeon, we find the following description, which accords well with our own observation and knowledge of the disease.

SYMPTOMS OF THE DISEASE.

"In localities in which the disease has never existed, veterinary surgeons themselves can be convinced of its presence only by dissection.

"1. The evolution of the disease, in the first period, is so secret and feverless, that only a practised eye can detect its presence. The first observable symptom is, a short, dry, weak cough, or hic-cough, generally without repetition, which, in the beginning, occurs but seldom, and then when the animal rises or is watered, but afterwards more frequently, and accompanied by great pain and effort, a remarkable crooking of the back, a stretching of the head and neck, and a quaking motion of the flanks, the cough becoming more and more hollow and dry; moreover, a slight feverish motion, frequent changes in the temperature of the horns and ears, the muzzle now dry, now moist, bristling of the hair along the back, often a greater sensitiveness when the same is pressed, and sometimes a somewhat excited pulse.

"In this period we find, on *dissection*, firm and incrassated spots of a darker red, and of various sizes upon the generally pale and flabby lungs, and afterwards an effusion of yellow lymph around them in the cellular tissue, lying between the lobes of the lungs. In this period, the disease, when properly treated, is almost always curable.

"2. In the second period, the appearances are: a feverish affliction of the whole body; an accelerated, difficult and unequal breathing, with expanded nostrils, and a violent motion of the flanks; a short, hollow, incomplete, and even suppressed cough; pain on pressing the breast behind the shoulders; continued standing with stretched head and neck, lying down only now and then, and for only a short time, and generally upon the diseased side, with the feet turned under the body, and the head and neck stretched out; reddened mucous membranes; dry muzzle; warm horns and ears; delayed, dry, ball-shaped, painful excrements; entire loss of milk.

"Dissection.—In this developed state of the disease, the affected lung appears hard, firm, enlarged, heavy, can not be inflated, sinks in water, is covered with lymph from one-half to one inch in thickness, and when cut through looks like marble. The pleura and the lungs are covered with false membranes of different thicknesses and different forms, and commonly adhesions between the lungs and the ribs have taken place. In the thorax a discharge of yellowish, cloudy water, intermixed with flakes and strings, is found in various quantities, sometimes a pailful. A suppuration seldom appears, except in case of a previous inflammation of the lungs.

"In the first period, by proper treatment, a cure can be effected with a loss of scarcely five per cent. of deaths, but, in the second, the best surgeon will scarcely succeed in curing five per cent.; whence it follows, that if the owners are unable to cure the disease themselves, they should seek competent assistance in the earliest stages. There is no infectious disease that spreads so easily as this disease of the lungs, so that those who attend to animals thus infected should not go into a healthy stable. The air which remains in the clothes is sufficient, even after an interval of several days, to spread the disease in other stables. Even the surgeon who has been in an infected stable, should not go into a healthy one, without first having himself fumigated with chlorine or tar. Horses are not liable to be infected. It is even advisable, and beneficial to the diseased animals, to put horses in the same stable, for it renders their cure so much the easier."

Breeding and Keeping Swine.

The following article is returned by the Committee to whom it was intrusted to decide upon the merits of the numerous articles received, as, on the whole, the most practical and universally applicable. The kind of swine which Mr. Henry describes is common in many parts of Pennsylvania and New-Jersey, and doubtless is the basis of the Chester County breed, which is now making an effort to become recognized as a regular breed. Whether it is really any better than any well-bred specimens of the Pennsylvania hog, we will not now discuss—but with so good a breed at hand, a farmer may be pardoned for knowing no more about the breed of his own hogs. We may with propriety here add that favorite breeds of swine with us, are the Windsor hogs, bred on Prince Albert's farm in Windsor, and the Suffolk. The former are considered an improvement on the latter, and both, with their crosses, are admirable for young pork. We like the Chester County breed for a large one, very much, but for Eastern farmers, a small, quick-maturing breed for slaughter at 8 or 9 months old, is preferable, and most profitable, for hogs grow very little in the Winter, as a general rule, unless at a very considerable expense in corn. Mr. Henry's plan of feeding his pigs a little grain all the time, so as to keep them in good, rapidly-growing condition, is particularly commendable. Keeping swine on the "root, hog or die" principle until fattening time, and then crowding them by a surfeit of corn, is very poor policy, yet extensively practised. Not less commendable is the boiling the corn, instead of giving the miller one-sixteenth of it for grinding, and then cooking it after all. We have no doubt the boiling answers every purpose. A few hours soaking would save fuel as well as better prepare the corn for digestion. As to marketing—how best to sell pork depends upon the market itself.—Ed.

[PRIZE ARTICLE.]

Rearing and Fattening Hogs.

BY GATES HENRY, SCHUYLKILL CO., PA.

The hog is well known all over the world, and is confined to no one part in particular. It belongs to the same class of animals as the elephant and rhinoceros, the thick-skinned, or Pachydermata.

The utility of the hog is in a great measure owing to its very remarkable fecundity, re-producing at one year old, and hearing from eight to ten young at a time (sometimes even more), and that twice a year. Some man-of-figures has estimated the produce of a single sow, with only six young at a time, in ten generations, to be about 6,500,000.

The hog was the animal which the Ancients sacrificed to the goddess of the harvest, Ceres.

It has been estimated that there are raised, in the United States, yearly, about forty millions of hogs, which, at $7 per head, amount to the immense sum of two hundred and eighty millions of dollars; if, then, the hog could be so improved as to raise his value one dollar a head, an immense amount of money would accrue to the interest of the farmer. As you say in your prospectus that you wish a farmer's experience with raising the hog, killing, curing, etc., in preference to his acquired knowledge of the brute, I will be candid enough to acknowledge that I do not know the breed of my own swine. They are only of moderate length, with broad, square shoulders and hams, short legs, and great depth, medium-sized heads and straight snouts.

Hardly a day passes that we do not hear the remark, "as dirty as a hog." This, I consider, a vilification of the animal which Franklin's colored servant said was the "only gentleman in England," from the fact that he was the only animal that did not work in that country; I believe that the filthy habits of the hog are in a very great measure owing to his domestication, for in this State he is cribbed up in a small pen, and is fed upon the offal of every thing—upon the most disgusting food—and is considered as much an instrument for converting filth into compost, as a source of wholesome and palatable food. He has the propensity of wallowing in the mire common to all animals of his order, but generally for the purpose of ridding himself of vermin, and of protecting his thinly covered skin from the attacks of insects. In this respect the hog is no more dirty than the elephant or the hippopotamus. No animal displays the changes arising from domestication more than the hog, which may be observed by contrasting the long-legged, wild and savage boar, with the short-chanked, docile, fat and plump Pennsylvania hog, which with difficulty walks rapidly across the confines of his narrow pen.

BREEDING AND REARING.

In selecting my breeding hogs, I always pick out the best shaped, most thriving boar pig to keep over for a breeder. For a sow I select a healthy shoat, well shaped, but thin and lank, in preference to a fat and sleek one; my reasons for this are, that the lean sow will produce more pigs, and raise them better, than one in high order—the sleek one converts all her food into fat and flesh for her own sides and back, while in the lean one it is converted into food for the young. This rule is applicable to all animals. A cow which shows every rib when in milk, will bring forth larger and better calves, and give more and better milk, than the one which always looks fat enough for the slaughter. My experience fully sustains my theory. My mode of raising hogs which are intended to be kept over, is to have them pigged about the latter part of August or first of September, and after allowing them to run with the sow from four to six weeks, confine them in a separate pen. When first taken from the sow they should be fed from six to eight times a day, or else they will fall off in flesh, and it will take them weeks to recruit. Their usual allowance, at first, should be about a pint of milk to each pig, and in order to facilitate the properly attending to them, the milk barrel should be kept standing very near the pen, from which it can be dipped with a pail with very little trouble, being replenished night and morning with fresh skimmed milk from the dairy. The quantity for each pig should be gradually increased each day according to the growth of the pigs, until they have attained to the age of three or four months, when a regular allowance should be made them; and the number of times feeding may be diminished. At this time in the pig's life a little grain fed night and morning, will not be thrown away on him; a little oats or rye if the pig is in a healthy condition, followed by about a pint of corn, which may be subsequently increased to a quart. This addition of grain will tell amazingly in the growth of the animal, as well as have a tendency to keep him in such a condition, that when "fattening time" arrives he will be ready for the knife much sooner than a hog fed only on slops without the daily quota of corn, to say nothing of the saving of a good deal more corn than has been used up to this time in the feeding. The milk from the dairy, when weakened by the slops from the kitchen, should occasionally through the week be enriched by the addition of rye bran.

STY AND BEDDING.

There is no greater mistake made by farmers than allowing swine to run about out of the pen. To say nothing of the immense destruction which they are liable to do, they so completely run themselves down that it takes almost double the amount of feeding to get them in condition for butchering.

The pen in which hogs are kept should consist of two apartments—a covered and an uncovered one. An excellent manner in which to construct a pig-sty, is to erect a two-story frame building, having a part of the under story boarded off for a place in which to keep the slop barrel, reserving the rest for a dry pen for the hogs, and have a pen constructed outside, and communicating with this covered one. The feeding trough should be in the outside pen. In this manner, if the pigs are given a sufficiency of rye straw in the inside pen, and the outside one is kept well supplied with the huts of a pig-sty, is to erect a two-story frame building, having a part of the under story boarded off for a place in which to keep the slop barrel, reserving the rest for a dry pen for the hogs, and have a pen constructed outside, and communicating with this covered one. The feeding trough should be in the outside pen. In this manner, if the pigs are given a sufficiency of rye straw in the inside pen, and the outside one is kept well supplied with the huts of corn stalks, they will not only make an immense amount of manure, but will keep themselves white and clean, thus refuting the assertion of the filthiness which is continually flung at them. In the upper part of this pen should be kept litter for the bedding for the hogs; or a part of it may be partitioned off for a hennery.

I have adopted what I consider a very good as well as economical plan of getting the upper part of my hog building filled with good littering material. It is this: When hauling in my corn fodder I cut off about two feet of the hard, dry buts, which the cattle can not eat, and have them bound into small bundles and stowed away in the upper portion of the hog-house, to be used as required. These corn buts when thrown into the outside pen are so torn and trampled up that they are converted into good, lasting manure, which has not its superior on the farm, and which would be almost entirely lost if fed to the cattle in the fields, etc.

FATTENING.

When fattening time comes, I generally commence by feeding the "nubbins," and after two or three weeks, follow them up with shelled corn. This I always feed boiled, boiling in the morning what is required during the day, and at night what is necessary for the morning. Feeding thus, brings my work nearly all in daylight. In this way I can make my hogs fat enough for all practical purposes, by feeding them from fifteen to twenty bushels of corn, each, and in slaughtering at sixteen months old, they weigh from four to five hundred pounds. I never like them to exceed the latter figure in weight, for I have no fancy for this overgrown and spongy pork of forced hogs.

HEALTH AND DISEASE.

You will observe that I do not particularize any disease or its remedy—the reason is that I know nothing about disease in hogs. I have never had occasion to know—taking care of my hogs, feeding them regularly and paying attention to their litter and quality of feed. In nine years' experience in hog raising, I have had but one die—and that one I am constrained to think was bodily injured, as he became so weak in the hind-quarters that he was unable to support that portion of his body, and died while in very good condition, showing no symptoms of disease.

KILLING AND CURING.

As to the killing of hogs, I presume that almost every farmer in the land knows as much as I do; at least, every one should. The butchering is a small matter—the work of a day—and I do not deem it necessary to insert my mode here, as all have nearly the same way of accomplishing this end. The way in which to realize the most money out of the hog meat is to cut every available scrap into sausage meat, and boil the rest into scrapple (curing only the hams), and selling it while fresh, and the sooner the better, as both sausage and scrapple command a higher price early in the winter than at any other season.

The curing of pork is, perhaps, one of the most important matters in connection with the rearing of swine, and my mode I consider as one of the very best, from the fact that it never fails.

After the meat (hams or shoulders) is thoroughly cold, cut and trim the hams very close, then rub them well with salt, pack close in a barrel or tub, and after laying for three or four days, make a brine of the following ingredients: To every 100 pounds of ham, allow 4 gallons of water, 9 pounds of salt, 4 pounds of sugar, 4 ounces saltpeter, and 1 ounce saltertus. The brine should be boiled and the scum taken off; when cold pour it on the meat. From four to six weeks should be allowed, (according to size of hams), for the meat to remain in pickle. After the meat is hung up, allow two or three days to dry, then smoke with as little fire as possible. Use green hickory, with sassafras in small quantities. As soon as the meat is sufficiently smoked, each ham should be taken down and carefully wrapped in paper, then bagged to prevent the depredations of flies, and hung in a cool dry place, out of the reach of rats and mice.

The foregoing embraces only the knowledge, notings, and experience of a practical farmer, about the hog. My object will be attained, if it shall prove to be of any benefit to any one.

INTERNATIONAL EXHIBITION BUILDING OF 1862.

Engraved for the American Agriculturist.

The immense structure in which the World's Fair of 1862 is held, is in South Kensington, London. It is built of brick, iron and glass, and roofed with wood, covered with felt, and furnished with sky-lights. The galleries, as they are called, extend over nearly the whole building, except the nave and transepts and domes. Our view presents the Eastern end; and the Western end is like it, having also just such a dome. These domes are of immense size, larger than the great dome of Saint Peter's church in Rome, being each 160 feet in diameter, and 250 feet high, while St. Peter's is only 130 feet in diameter, and 263 feet high. They are constructed of glass and iron, and must resemble considerably the beautiful dome of the World's Fair building in New-York in 1853. The domes stand nearly 1000 feet apart, and are connected by the *nave* which is like the body of a church, 85 feet wide and 100 feet high, and 1200 feet long. At each extremity the nave is crossed by a *transept* 700 feet long, by 85 feet wide, and 100 feet high, the domes standing at the intersection of the nave and transepts. The long front presented in the engraving is that of the eastern transept. The long southern front on the left of the picture is 1200 feet long, and the entire space between it and the nave is covered; as is also a nearly similar space on the northern side of the nave. The whole area covered is about 15 acres, and the space occupied for exhibition purposes, 1,300,000 feet, exclusive of the temporary building, 800 feet by 200, erected on the northwestern corner for machinery, etc.

It is said there are 600 miles of floor-plank used, partly 6 inches and partly 7 inches wide, and many other curious statements are made. This immense building is well filled in nearly every department, and the managers have been obliged to exclude a vast number of articles, particularly in the British part of the exhibition. Had all the applicants for space from England alone, applying before Dec. 1st, been allowed all the space they wanted, it is said they alone would have required a space nearly three times as large as the entire structure.

The garden and show grounds of the Royal Horticultural Society are directly in the rear of this building on the north. The Show of the Royal Agricultural Society, however, is considerably removed, being at Battersea Park, on the other side of the Thames River.

Editorial Correspondence.

ROYAL AGRICULTURAL SOCIETY'S SHOW—HINTS, ETC.

LONDON, ENG., *Tuesday Evening, June* 24, 1862.

One of the leading attractions which brought me across the Atlantic, and one which has drawn together here a large concourse of agriculturists, not only from all parts of Great Britain, but from the Continent of Europe also, is the great meeting of the "Royal Agricultural Society," held this year in London. In consideration of the fact that the "International Exhibition," or "World's Fair," would concentrate here an unusual number of visitors, the Managers of the Royal Agricultural Society have made strenuous efforts to get up a Show on a scale far surpassing all previous ones in completeness and magnitude. They have succeeded admirably, but I suspect from what I can see thus far, that they are likely to be disappointed in the returns to be received from tickets of admission. It would seem as if one such attraction as the "International Exhibition" really is, would be quite enough in one season, even for the City of London. It is too early yet, however, to judge how far the Agricultural Show will be overshadowed by that of art and manufacture.

I have only time before the closing of the trans-Atlantic mail, to note a few things—those which may afford hints to the managers of our own Agricultural Societies. The present policy of the Royal Society, is to concentrate upon only one Department of industry annually. Thus: (1) one year prizes are offered only for implements for preparing the soil. (2) The next year the prizes are for harvesting implements, (3) and the third year for implements used in preparing the grain for market, and in fitting it for feeding. Last year the first class was on trial. This year the prizes are given only to animals. But though prizes are not offered, all varieties of implements and agricultural products are invited for exhibition. The appearance of the grounds to-day shows that prizes are not needed to call out exhibitors. The entries in the Implement Department alone exceed 5,000! The display is very fine, including every thing that can be used on the farm, in the orchard and garden, and in the farmer's household, from a mousetrap to the ponderous steam plow. The Show grounds cover over 20 well packed acres, about half of which are occupied by covered stalls for farm animals. The latter are separately enclosed, and no one not directly employed about the animals has yet been admitted. I have not myself "professionally" visited this enclosure, and can therefore say nothing of it, beyond the fact that there are, for the animals alone, *twenty five* canvas-roofed rows of sheds, each nearly 500 feet in length, and I learn that they are pretty well filled with animals. The judges, in three sets for each class of animals, have been at work all day, and to-morrow the public are invited in at a pound sterling (about $5) each, to see the animals and hear the awards. The daily admission to the implement yards alone, for all of this week, is 2s. 6d. (about 63 cents)—a price which, with us, would be considered extravagant for seeing the whole show. Thursday the admission to the whole ground is to be 5s. (about $1.25); on Friday and

Saturday 2s. 6d., and the first three days of next week 1s. (about 25 cents).

The system and order everywhere visible in the implement department is admirable and worthy of general imitation. A separate division is allotted for machinery in motion, and here I find about twenty farm steam engines all in operation. The field trial is twenty miles distant, where there are a dozen steam plows and steam cultivators to be tested on Thursday, Friday, and Saturday. Within the main enclosure are 16 canvas tents, each from 450 to 500 feet long, and these are filled up with an infinite variety of implements of every conceivable kind. Some of them are new, and not yet familiar to American cultivators, but not a few of these implements are the result of Yankee inventions. Every article exhibited is required to have its retail price plainly affixed. The entries were closed nearly two months in advance, which left ample time to arrange each article or group of articles in good order, and in appropriate places. It also allowed the printing of a complete catalogue of every thing exhibited, and its exact place on the ground. This catalogue also contains a brief description of the articles, in from one to twelve (12) lines. Six lines are printed without expense, but each line above six is charged for at the rate of two shillings (½ dollar) per line. The catalogue, though containg 450 pages, is furnished at a shilling. It gives an engraved diagram of the whole exhibition ground, the number of the tent, etc., so that any one having it can go directly to any article he may wish to examine. It will be well for the managers of our exhibitions to adopt a similar method. A book or pamphlet of entries allowing each exhibitor to set forth the peculiar merits of his implements or other products, in a limited space at a specified rate per line, would afford a handsome revenue, and be advantageous to both exhibitors and visitors. I have not time to further describe the agricultural exhibition, which is, beyond comparison, the largest and best arranged agricultural show yet produced. I expect to gather very many hints which will, I trust, be useful to our readers, in the future.

O. J.

Awards at the Royal Agr. Show, (Eng.,) July 2, 1863.

SHORT-HORNS.

I.—Bulls over 3 and under 6 years old: 1st prize, $150, to "Lord Adolphus," sired by Mr. Booth's Cardigan (12,556), dam, Lady Annabella, bred by John Wood, Darlington, Yorkshire.—2d prize, $75, to "Lord of the Harem" (16,420), sire, Duke of Buckingham (14,428), dam, Grand Turk, shown by J. H. Langston, M. P., of Chipping Norton.

II.—Bulls over 2 and under 3 years old: 1st prize, $150 to "Perth," sire, Prince Alfred (13,494), dam, Rowena, shown by Wm. Stirling, M.P., of Kier, Dunblane.—2d prize $75, to "Sinemester," (white), sire, Prince Victor (12,944), dam, Griselda, shown by Henry Ambler, of Watkinson Hall, Halifax, Yorkshire.—3d prize, $25, to "Great Seal" (red) sire, Lord Privy Seal (16,444), dam, Jenny Grost, shown by A. J. Balfour of Whittingham.

III.—Bulls over 1 and under 2 years old: 1st prize, $125, to "Wilmer-in," (roan), (19,179), sire, Cock of the Walk (15,782), dam, Annie, bred and shown by Stewart Majoribanks, of Waterford, Herts.—2d best, $75, to "Royal Butterfly" sire, Royal Butterfly, dam, Sweetheart.

IV.—Bull calves above 6 and under 13 month's old: 1st prize, $75, to calf shown by Jonas Webb, Babraham.

V.—Cows above 3 years: 1st prize, $100, to R. Booth, North Allerton.—2d prize, $50, to Lady Pigot, New Market.—3d prize, $25, to Jonas Webb, Babraham.

Among the owners of winning animals in other classes of Short-horns are: Duke of Montrose, Glasgow; J. Lane, Cirencester; Lord Feversham, J. Douglass, R. Booth, Lt. Col. Towneley, T. Atherton, R. R. Middleboro, J. Robinson, Lady Pigot. Jonas Webb received a gold medal as the owner of the best male animal among the Short-horns, and R. Booth, North Allerton, the same for the best female animal in the Short-horn classes.

HEREFORDS.

The first prizes in the four classes of bulls go to Hon. Col. Hood of Windsor Park, R. Hill of Shrewsbury, J. Taylor and C. Yeves of Leominster, respectively.

The first prizes in the 4 classes of cows and heifers go to H. Coate of Sherborne, J. M. Read of Cheltenham, Hon. Col. Hood, J. Baldwin of Stratford-on-Avon.

Richard Hill of Shrewsbury, is the recipient of the medal for the best male animal, and H. Coate, of Sherborne, received the medal for the best female.

DEVONS.

First prize for best bull over 3 and under 6 years, was awarded to James Davy of North Molton; do. for best bull over 2 and under 3, to W. Farthing of Bridgewater; do. for best yearling bull, to Hon. Col. Hood of Windsor Park; do. for best bull calf also to Col. Hood: do. for best cow over 3 years, to James Davy of North Molton; do. for best heifer, in milk or in calf, under 3 years, to W. Paull of Piddletown; do. for best yearling heifer, to Jas. Davy of North Molton; do. for best heifer calf from 6 to 12 months old, to J. Davy of North Molton.

Gold medal for best male animal was awarded to Jas. Davy of North Molton; and for best female to the same.

JERSEYS OR ALDERNEYS.—The owners of first prize bulls are D. Smith of Bainstoke, R. Watts of St. Heliers, Jersey; and first prize cows, etc., are owned by F. Newman, J. Pye, of Stamford Hill; A. Le Gallais, St. Aubins, Jersey, whose cattle also received one 3d prize, and several high commendations.

AYRSHIRES.—In the four classes of bulls, the first premiums go to the Duke of Hamilton and Brandon, J. Stewart of Strathaven, in 2d and 3d classes, and the Duke of Athole of Dunkeld. The three first premium cows and heifers are owned by the Duke of Hamilton and Brandon, in 1st class, and J. Stewart in 2d and 3d classes.

SUSSEX.—Prizes are awarded in three classes of each breed, *viz*: I. Shearling ram. II. Ram of any other age. III. Five Shearling ewes. The following are the names of the owners of 1st prize animals of some of the breeds most valued in America:

Leicesters.—W. Sandy of Holme Pierrepont sweeps all the prizes given to this breed, except the 2nd in the first class, and takes a gold medal for the best Leicester ram.

Cotswolds.—W. Garne, Bibury; W. Lane, Northleach, in 2d and 3d classes.

South-downs.—Earl of Radnor, Highworth; W. Rigden, Brighton; Sir R. G. Throckmorton, Carrington.

Cheviots.—T. Brydon, Moffat; W. G. Hunter, Langholme; T. C. Borthwick, Langholme; R. Borland, Closeburn.

Preparing for Wheat.

The time has been when, throghout all the Atlantic States, there was no need of manuring the soil for grain crops. The rich, virgin lands contained all the necessary elements for their growth and maturity. This is true now, to a greater or lesser extent, at the West. But elsewhere it is otherwise. The dung-cart must precede the reaper, or the latter will gather only scanty sheaves. There is little reason to fear that the plants will expend all their force in producing stalks, at the expense of well rounded grain, or that the crop will lodge and mildew. We must make our soils warm and mellow, and get a quick, vigorous growth and early maturity, else the midge will follow hard after the crop and destroy it. From five to ten days in the time of maturing the crop, generally decides whether or no it will become the prey of the midge or rust.

What does science teach us in reference to the needs of our soil? Prof. Norton says: "The grain of wheat contains from 50 to 70 per cent of starch, from 10 to 20 of gluten, and from 3 to 5, of fatty matter." It would seem that wheat contains more nitrogenous substances than any other grain. A careful writer on this subject says: "Up to the formation of the kernels, ordinary soils, with rain, dew and air, can furnish and grow the wheat plant. But when it comes to the fruiting part, the plant has to seek in the soil for materials out of which to fabricate its seed. It is necessary, therefore, that there be in such soil what we farmers call nutritive or purescent manure—something out of which *nitrogen* can be formed." In barn-yard manure, and other fertilizers of similar character, we find this important element.

Every farmer who intends to sow wheat in the Autumn, should preserve a large lot of his Spring supply of manure to put in with his grain. Increase the pile in every possible way, during the Summer. Compost it with sods, half-rotted leaves, or straw and other litter, and in a few months the heap will have doubled its size and also its value. This stack being worked over will be in a half-decomposed state by sowing time, and thus will be in just the best condition for nourishing the young crop.

The common practice of manuring for corn in the Spring, and then following this with wheat without any more manure, may answer on some strong and rich lands; but otherwise, a fresh and abundant supply should be given before sowing. Some of our sagacious farmers apply a barrel of salt per acre to their wheat lands, a short time before seeding, and find the result every way satisfactory.

That early and hardy varieties of wheat—such as the Mediterranean and Golden Drop—should be chosen for seed, where experience does not assure the success of other kinds; the land well drained, and the sowing done early, are points so manifest they need no urging.

Top-Dressing Mowing Land.

The cutting of grass for hay is an artificial process, and must do more or less damage to the roots. It stops the growth of the plant in its greatest luxuriance, and removes the shade from the roots at the season when they most need it. If the weather is dry they remain exposed to the burning sun for weeks. Timothy, especially, is a long time in sending up new shoots, and is often killed outright by close mowing. The bulbs dry up, and it is quite likely that winter-killing gets the blame for injury done by the scythe in Summer. In pasturing land the grass is removed very gradually, and it is at no time bare. Good land not fed too close, will remain in grass, giving remunerative crops for a century. But mowing lands, as they are generally managed, need to be re-seeded every fourth or fifth year. Where a rotation is followed this may be the wisest course. But a farmer often has some lots that he would like to keep in meadow continually. He may do this by top-dressing immediately after mowing. This is especially desirable with lands seeded to timothy. From several experiments we believe this to be the best time to apply a well made compost, or any coarse manure, and should always attend to it now, if the haying were not so pressing. But with mowing machines and horse-rakes, farmers can accomplish much more than was possible twenty years ago. The manure acts as a mulch to the roots of the grass immediately. It makes the most of every rain and dew that falls, and soon changes the bare meadow to a green field. The aftermath is much more luxuriant, and we get, in the increased burden of grass, a return for the manure within two months of its application. We believe meadow land may be kept up to a yield of three tuns to the acre, by the annual application of compost as soon as the grass is cut.

We have before us a strip of meadow manured at this time two years since, and another by its side treated in the ordinary way, i.e., mowed and left to take care of itself. The one has a promising growth of timothy, and upon the other this grass and the red-top have mostly given place to sorrel. We know of no reason for the difference except the top-dressing in July 1860. We never apply manure to meadow land, more or less, at all seasons, but manage to have a good supply for the land as soon as the hay crop is gathered. By this course, we expect to keep some fields in grass perpctually, with no falling off in the yield.

A Connecticut farmer, recently speaking of the very great value of seaweed, particularly rockweed, told us he had employed an old man with an old horse to draw rockweed last year, and spread it daily upon mowings, from August to November. The loads were small. A very great good effect was seen, but most markedly by far, where the application was made earliest in the season—equally shown in the first crop and in the aftermath this year.

Weeds.

"Slack never thy weeding, for dearth nor for cheap,
The corn shall reward it, ere ever ye reap;
And especially where ye do trust for to seed,
Let that be well used, the better to speed."

Old Tusser uttered many pithy sayings in his rude rhymes, doctrines as sound to-day as when they were uttered. We have now reached a season when many are accustomed to slacken their weeding, and thus lose much that has been gained by the clean tillage of the first part of the season. The corn is laid by, and the potatoes, and weeds grow apace even in the shade of the crops. They go to seed, and completely stock the ground, making work for future years. It is a busy season of the year, and it is thought that labor will pay better somewhere else, than in subduing these pests of the farm. We have seen corn fields well manured, and otherwise well managed, so matted with grass and weeds, that there would be a loss of thirty per cent. on the yield. We have seen oat-stubble, and other fields stocked to grass, so overgrown with weeds that the young grass was choked, and made so feeble that it could not withstand the Winter frosts. We have seen pastures overgrown with Canada thistles, briars, and shrubs, so that they would not yield half a crop of grass, and this of inferior quality.

What is to be done with our August weeds? It is of course too late to cultivate potato fields, as that would lead to the setting of small tubers. Some varieties are already dug, and others soon will be. All sorts, if planted early, would mature by the last of this month, and then the weeds might be turned under by the plow before they have time to seed. One of the advantages of a second crop is, that it makes clean work with the weeds. Turnips, beets, carrots, and all the late crops require cultivation, until it is too late for weeds to seed. Even if the ground lies idle, it will pay to turn in the weeds. Suppose it costs $2 an acre, that is cheaper than to do $4 worth of extra weeding next season.

Corn is frequently cultivated this month, for the third or fourth time, and when the rows are wide enough, and the corn is not too forward, the horse should be kept moving between the rows. If this is not practicable, we can still pass between the rows with the hand-hoe, and cut up the few weeds that have started since the last cultivation. It is cheering to see a piece of corn having the whole strength of the soil, not a weed standing among it. This, if the crop is otherwise well treated, fills out the eob to the end, and handsomely caps it. Cultivation is, to a certain extent, a substitute for manure, and with a plenty of this article, secures maximum crops. Few weeds will be found where corn grows at the rate of ninety bushels to the acre.

There is no better month than this to kill Canada thistles, brush, and briars, that infest pastures. Cut, pile, and burn, without regard to the phase of the moon. Whatever quarter that orb may be in, give no quarter to these pests. There is no economy in cutting down expenses by refusing to cut weeds and brush. Bush scythes would be cheap if they cost their weight in gold. Joe Stubbs has twenty acres of pasture capable of feeding as many head of cattle. One half the area is covered with briars, alders, elders, hard-hack, and Canada thistles. He can only pasture six cows and a horse there, and they are not very well fed. Joe is afraid of the bush scythe in dog-days. It is lonesome work. He is losing at least a hundred dollars a year for the want of it. It would not be lonesome to see twenty head of cattle in there, with no brush to hide them. Elbow grease is very efficacious in subduing weeds, and its use is good economy. JONATHAN.

Choosing a Building Site.

With some persons, the range of choice is very limited. If they are men of business, they must live quite near the shop, store, or office; if they are farmers, they must build the house near the center of their land, or where most convenient to carry on the farm work. But with others, the case is different; and it is to them chiefly that we now make the following suggestions:

I. One thing to be considered in choosing a site, is its *accessibility*. Persons of a poetical or romantic turn of mind might choose to live perched on a high and wooded hill, remote from the common thoroughfares of men. But sober people would inquire, how are we to get to the house in dark nights, in muddy weather, and in winter? How are we to draw the hay and the wood, and other useful truck? Will it be convenient for our neighbors and friends to visit us, and for us to get to them? Strong as may be our attachments, if it is difficult for us to reach our friends, or for them to get to us, it will place a formidable barrier between us; our visits will be infrequent, and our attachments will gradually abate. The post-office, the church, railway station, stage office, and the store are institutions which men can not well get along without, now-a-days. Let us have an eye to these things, before laying the corner-stones of our permanent dwellings. Crossing many bridges, struggling through muddy roads, or toiling up and down hills, all interfere with accessibility, and should be avoided, if possible.

II. The *surroundings* of a site should be considered. Who, unless he be the smithy himself, owner and proprietor, would want to build a house with the smoke and dirt of a forge just under his windows? Cattle-sheds, pig-stys, a slovenly neighbor's out-houses, any kind of building used for manufacturing purposes, a slaughter-house, a quagmire,—in short, any thing and every thing in the line of nuisances ought to be avoided. One may think, perhaps, that custom will reconcile him to almost any thing; but not so, if he or his family are persons of sensibility. Whoever builds in the neighborhood of a nuisance will find it a source of continual mortification and regret, and will be quite sure, ere long, to sell out his property at considerable sacrifice.

In some places, a number of persons club together and buy a tract of land for building-sites, entering into a written contract that neither they nor their heirs or assigns shall use the land for other purposes than for residences and gardens. At Llewellyn Park, in Orange, New-Jersey, a similar plan has been adopted. A large tract of land is owned by a corporation, who offer building sites for sale on condition that the houses put up shall be of a respectable character, and shall have nothing in their appurtenances to offend good taste.

A small annual tax is assessed upon the lot-owners to meet the expense of keeping the roads, fences, etc., of the Park in repair. In such an arrangement, it would seem that one might enjoy the elegancies of a refined rural home in the midst of a handsome landed estate, without the expense and trouble of taking care of more than the small spot immediately around his own door, and perhaps the garden in the rear.

III. The *healthfulness* of a site is an important matter. One would hardly wish to build on the edge of a marsh, or of any standing water, unless he is proof against malaria. Then, there are some situations where the wind sweeps violently through gorges, or up and down long valleys, which are alike unhealthy and disagreeable. Low grounds generally are subject to dampness in Summer, and to extreme cold in Winter. But in avoiding low grounds, let us not go to the other extreme of pitching our tent on a high and bleak hill. A site moderately raised above low flats, yet not on the hill-top, is ordinarily the most salubrious, as it is the most pleasant. Such sites afford pure air, pure water, good drainage, and cheerful prospects, all of which are conducive to health and happiness.

IV. The *nature of the soil* should be looked to. Whoever builds in the country, builds there principally for the sake of having a little farm or garden and orchard, and ornamental trees. But these will not succeed well on a rocky bluff, a sandy plain, or a bed of clay. Is the soil good for farming purposes? Will it grow corn and potatoes well? If so, then an important question is settled. For, if it will raise these, it will raise magnolias, pears, grapes, wheat, and whatever else one has a mind to cultivate. If the soil is poor to start with, time and money, and a great deal of patience, will improve it; but the process will be very laborious.

V. Any improvements already made upon a site should have considerable weight in determining one's choice. An orchard, not too old and scraggy, a few good shade trees of large size, any amount of grading, draining, manuring, fencing, etc., that may have been done, is only so much time saved, and so much money invested for the buyer's benefit. Pleasant as it is to create one's homestead wholly, yet life is short, and it is quite a help to have a few things already created to one's hand.

We might add other hints, but these are all that our crowded columns will now admit. To all contemplating building dwelling houses, we say, think *twice* before you build once.

Spontaneous Vegetation.

To the Editor of the American Agriculturist.

"Now, did this vegetation spring from an original principle in the soil, or from seeds, perhaps a thousand years old, buried in that hill? How came they there? Did the fire beget them?"

The foregoing "nuts" of SCHOLASTICUS, in the June No. of the *American Agriculturist*, may not, after all, prove to be as hard-shelled as some imagine. I am rather of the opinion that a little impression may be made upon some of them, by striking them in the right way. It is well known that the seeds of many plants will retain their vitality for an indefinite length of time, in favorable situations. I saw an account not long since, of seeds being found with an Egyptian mummy, that had remained for *thousands* of years entombed with the body, which readily germinated, on being planted in suitable soil. After the burning of the timber of an old "girdling," in my immediate vicinity, "multitudes of a cruciferous plant," (the *Brassica rapa*) were found growing, in some of the beds of the burned logheaps, which excited the wonder and astonishment of the whole neighborhood. It was at length ascertained that the part where the *rapa* was growing in such quantity, had, about twenty years previous, been a "turnip-patch." The seeds of numerous plants, as every body knows, require a very great amount of heat to make them sprout. Some, for this purpose,

pour boiling water on onion seed. The vitality of some seeds is preserved by water. The bulblets of the *Lemna* (Duckweed), always remain from Autumn until Spring, in the bottom of shallow ponds, and if carried into deep water, and then should sink below the warming influence of the sun's rays, instead of rising to the surface and germinating, *might* remain for years, and still retain their vitality. The *Isnardia palustris*, an aquatic, growing in the bottom of streams of water, will flourish equally well if the stream happens to change its course and leaves the plant on dry ground. The *Hibiscus moschentos* I have frequently transplanted from the borders of lake Erie into dry ground, and it has uniformly flourished as well as in its native marsh. And so of scores of other plants.

We *know* that *seeds* will produce plants. It has been demonstrated ten thousand times before our eyes. But that they have ever been produced in any other way, since the formation of the first specimens, described by Moses as the third day's work of the Creation, *I* have no evidence for believing. To depend upon an "original principle in the soil" for a crop of weeds even, I should consider a very uncertain affair. I sow the seed, believing, with Paul, (II. Cor. xii. 28) that "God giveth to every *seed* his (its) own body." But if the soil produces plants without seeds, it can be proved. Institute a thorough examination, with magnifying glasses of high power, when the *thing* first starts into being. Trace it down to the "center of motion," and if there is absolutely no cotyledon, none of the essential organs of a seed, *then* write under the examination Q. E. D. DISCIPULUS.

Little Mountain, Ohio, June 1862

Tim Bunker on the Cost of Pride.

"Father, have you seen the *Agriculturist?*" asked Sally, as she handed her second baby to her mother and the paper to me. I had been to the post-office that afternoon, and had not had a chance to look at it, even if I had been in the house long enough to do it. This is generally the way; the women have the first cut. I have known Mrs. Bunker to leave a batch of dough she was mixing to read the paper, and that I guess is about the last thing a house-keeper ought to leave, especially if the yeast is good.

You see it so happened that Sally and her children came over from Shadtown that afternoon, to make us a little visit. She has always been good about coming home, and since John has been gone to the war we have seen more of her than usual, which is very thoughtful in her.

"Well no, I haven't. What is in the wind now?"

"Just read what a Western Farmer says about your taking lessons in spelling. You see you get great credit for my correcting your letters?"

"Credit, girl! The man is poking fun at me for writing out of character. I knew it would come to this, if you and the printers didn't let my spelling alone."

I have never told the public what lots of trouble I have about these letters, being a modest man, and not caring to push my private matters into notice. Folks are so awful proud now-a-days that everything has to be fixed up before it can show itself, from a baby's dress to a President's proclamation. They even find fault with Lincoln's State papers, because the rhetoric isn't quite tall enough, and the grammar don't always break joints. I'm expecting nothing else but they'll get out a new edition of the catechism, and our children will be taught "The chief end of man is to fix up."

You see in the first place I didn't want to write at all, considering that I understood the use of a plow enuff sight better than the use of the pen, and remembering that old saw "Let the cobbler stick to his last." I still think there is wisdom in that saying. But you see the editor thought I had better write, that I ought not to hide my light under a bushel, and all that sort of thing. He was very civil in his compliments, and what was I that I should set up for knowing more than an editor, and the editor of the *Agriculturist*, too? I thought he ought to know what sort of talk would edify farmers, and I didn't pretend to be any thing else. So I promised him that I would write for one year, and have kept on ever since.

Then Mrs. Bunker didn't want me to write; 'twould make a public man of me, and folks would come to stare round the house, as if they expected to see a lion in his cage; lionizing I believe she called it, and I suppose that was about what she meant.

Then Sally put in agin' my writing; said she should be ashamed to have my letters to her printed, because the spelling was awful. She admitted the sense was good enuff, about equal to any thing they had in boarding school, but the grammar and the spelling wanted fixing. So I had to tell her if the spelling didn't suit her, she might fix it to suit herself. For my part I couldn't see why it wasn't just as well to spell words as they sounded, as to follow the dictionary. I thought plow was about the same tool, whether they spelt it with a *w* or *ugh* at the end; one was considerable shorter than the other, and would save ink; besides, every body would know what I meant, and that was the end of talking or writing, to be understood. But I couldn't convince her by any common sense arguments, that my spelling was good enuff.

So "Western Farmer," and the public will see that my ideas have to go through about as much grinding and fixing before they come to light, as a bag of wheat does before it comes on to the table in the shape of bread. Sally must have her say, and the editor his, and the printer puts in the stops and pauses; so that by the time my ideas get back to me in the paper, I don't hardly know them. Some of them look as if they had been to college, and some to boarding school, and some brought up on a farm. But I take it the sense is understood, which is the chief thing.

There is one thing I don't exactly understand, why they should put in what Jake Frink says, and Uncle Jonathan, and the rest of them, just as I write it, and practice their fixing up on me. I talk for all the world just like Seth Twiggs, but Sally says that is the vernacular, and don't look well in print. Perhaps it don't. Tastes differ. I don't think it pays for altering. In my opinion Sally had better mind her babies than to be tinkering with my spelling, and I guess the public would understand my writings quite as well if the printer didn't spend so much time on the commas and exclamation points. Why, any fool would know when a question was asked, without the sign. They say they keep a fellow in the printing office at about $3 a day, just to tend to this kind of tinkering. I don't think it pays; but that is none of my business.

This pride shows itself everywhere, and is about as troublesome on the farm as in the city. I am afraid it will be the ruin of the nation yet. It seems to grow worse the longer I live. It costs me a great deal more to live than it did my father, and if John ever gets back alive from the war, he will never be able to live in the simple way I have done. Pride costs more than all other necessary family expenses. It has made many a man a bankrupt, and it keeps a good many of my neighbors poor. Every thing they earn is spent upon their backs, or upon ornamenting and fixing up their houses and farms. Farming is a good business, and pays all decent demands upon it, but it will not support much pride. A fence that costs a dollar a rod will turn cattle just as well as a faced wall of hewn stone, costing twenty times as much. The nineteen dollars extra goes to the support of pride, and farming ought not to be expected to foot the bills. A barn that will shelter hay and cattle, is just as good as one costing four times as much, finished as elegantly as a dwelling. Farming will not pay for the clapboards, the lath and plastering, the ceiling and varnish. If a man has made a fortune in trade, there is no objection to his building a country seat, and living like a prince. His profits will support his pride. But the profits of ordinary farming will not justify a like expenditure. He may keep, if he will, a servant to each member of his family, but a farmer must serve himself. When he gets above his business he had better leave it. It strikes me that a farmer's pride ought to run to his business, rather than to his walls, and buildings. Other folks have to have dwellings, barns and fences, and it is no great shakes to own good lumber and paint. But farmers only have a deep rich soil, fine wheat and corn fields, and luxuriant meadows. It will pay for a farmer to cure a horse-pond, to drain a swale, or to turn a barren pasture into a meadow that will cut three tuns of hay to the acre. It will pay for him to raise fine horses and cattle, pigs and sheep. He ought to gratify his pride in the line of his calling, and not undertake to rival merchants and nabobs. If he fixes up his fields and breeds good points in his stock, people will not trouble themselves very much whether he says *cow* or *kow*, or attends spelling school late in life.

Hookertown, July 15th, 1862.

Yours to command,
TIMOTHY BUNKER, Esq.

[Squire Bunker's, like the rest of our correspondence, has to go through the mill.—ED.]

Book Farming.

We sometimes meet with farmers who deride book-learning as useless, yea, as even hurtful to the interests of agriculture. Give us experience, they say; that is enough, and that is safe. We know one farmer in particular, a shrewd, keen man, who learned his calling from his father before him, and who still learns much by visiting his brother agriculturists; but he has a mortal prejudice against book-farming. Probably, much of what he knows and prides himself on knowing, is really the product of scientific study by bookish men. If many of the useful methods which he practises had never been disseminated through books, perhaps neither he nor other farmers would ever have known them.

When a man has learned something really useful, (no matter how he learns it,) why should it not find its way into print for the benefit of others? But no—oh no! for then it would become book-farming. Some one has likened such a narrow-minded man to the great Omar, who said of the books in the Alexandrian Library, "If they contain only what is in the Koran, they are not needed. If they contain what is not in the Koran, it must be false. Let them be burned." So, if papers and books contain only what he knows, they are useless; if they contain anything he does not know, they must be false, and should be discarded, if not burned.

FIRST PRIZE SEEDLING—BROOKLYN SCARLET.

down the sides, was glowing with strawberries and roses, and crowded with gratified visitors from 1 o'clock on Friday till 6 o'clock on Saturday evening. Before visitors were admitted, the Committee, consisting of Dr. I. M. Ward of Newark; P. B. Mead, Editor of the "Horticulturist"; R. G. Pardee, author of the "Strawberry Manual," and Lowell Mason, jr., Esqs., had finished their examination, and very soon after, the names of exhibitors and the cards indicating the awards were placed upon the plates. The show was a very instructive one, on account of the great number of choice varieties, and the perfection of the berries. There was considerable competition for the prize offered for the largest three berries. The prize was taken by Mr. Heins of Woodstock, an amateur, with three berries of the Triomphe de Gand, 5¼, 5½, and 6 inches in circumference, and weighing altogether 2 ounces. The cut which we present represents them very well, and shows the tendency of the Triomphe to assume the cockscomb shape, so far as to form almost perfect rosettes, the stem being in or near the center of the flat, circular fruit. The show of varieties from the Marshalls was very fine, the berries being of large size, in fine order, and of valuable varieties. Mr. Heins showed other very well grown berries of choice kinds also, doing great credit to him as an amateur cultivator. Mr. Fuller has for some years been growing famous on account of his success in raising fine seedlings; the choicest of his collection were presented, with the exception of some which were already past, among which was the Bartlett, a fine berry, and very early; it is also one of those varieties, plants of which we have been distributing free to new subscribers. Mr. E. Williams' berries were fancifully arranged in cones, and made quite a show, attracting much attention from visitors, but the berries did not appear by any means so well as if they had been in plates, though the collection included many choice kinds. The collection of Mr. Prince was interesting from the number of his own seedlings that it contained. It was, however, entered for exhibition only, therefore shielded from criticism, and ought not perhaps to be compared with the beautifully grown berries exhibited by others.

HIGH COMMENDATION—GENERAL SCOTT.

The Agriculturist Strawberry Show.

The time appointed for the exhibition of Strawberries at the Office of the *American Agriculturist*, was well selected, taking into view the lateness of the season, as it came in the very hight of Strawberry time. A few valuable varieties were *past*, but most were in their prime.

We give a list of exhibitors and varieties shown by each on next page. The spacious office of the *Agriculturist*, with tables extending through the middle from Park-Row to Nassau-street, and

We give engravings of three of the seedlings, which received the notice of the Committee, and regret our inability to show also a cut of Mr. Burgess' *Little Monitor*, which received the premium as the best flavored seedling.

Brooklyn Scarlet, raised by Mr. A. S. Fuller, of Brooklyn, as announced in the list of premiums published last month, took the prize as the best seedling. It is well represented in the engraving. Berry large, long conical, symmetrical; color bright scarlet; flesh nearly white, firm, and juicy; seeds brown, prominent; calyx large; flower-stalk stout; flavor good; quality *best*. Plant hardy, vigorous, very productive, rather late; flowers perfect.

Garibaldi, raised by Mr. Wm. A. Burgess, of Glen Cove, received the second prize. Berry large, elongated, semi-cylindrical, (often more so than the cut represents); color rich crimson; flesh light colored, firm; seeds moderately depressed; surface glossy; flower-stalk erect and stout; flavor sweet and excellent; quality best; plant hardy, productive; foliage large, vigorous, and shadowing the fruit; early; flowers perfect.

General Scott, also raised by Wm. A. Burgess, received the high commendation of the Committee. Berry large, nearly round, with neck and calyx easily separable; color bright scarlet; flesh streaked with color, firm; seeds deeply imbedded; fruit-stalk erect, stout, flavor and quality best. Plant very vigorous, hardy; foliage large and of a dark, rich green; flowers perfect; ripens early.

SECOND PRIZE SEEDLING—GARIBALDI.

Little Monitor (Burgess) is a medium-sized, round, light-colored, white-fleshed berry of excellent flavor and exquisite quality, firm, but smooth and delicate in texture.

Monitor, another of Fuller's choice seedlings, was exhibited, but being the last pickings of the season, was not entered for the premium. We esteem it very highly as one of the very best of the larger berries. It is described by the committee of the Farmer's Club as follows: Berry very large, obtuse conical; color scarlet; flesh light colored, firm, and moderately juicy: seeds dark brown, prominent; calyx large, and easily parting from the berry; foliage large, coarsely serrated; flower-stalk stout; flavor good; quality best; very productive; early; flowers perfect.

[Mr. Fuller requests us to state that his 3 Seedlings, Brooklyn Scarlet, Col. Ellsworth and Monitor, are disposed of.]

The engravings we present were very carefully drawn from the fruit, and represent faithfully the size and character of the individual berries, of which they are portraits. The outline below the *General Scott*, is the size of a berry not of the group drawn, but not of an uncommon size. The berries selected for drawing the seedlings were not the largest in any case, but only a little above the average, and selected for showing the characteristic shape of each va-

WINNERS OF PRIZE FOR THREE LARGEST BERRIES—TRIOMPHE DE GAND.

riety. The outline with the large berries is that of the largest, from another point of view.

This exhibition, like others already held and purposed to be held in the office of the *American Agriculturist*, was undertaken solely with a view to advance the knowledge of an important subject, deserving the intelligent appreciation and investigation of the public; and except so far as it is an advantage to the *Agriculturist* to be recognized as earnest, wide-awake, and discriminating in all these matters, we sought no selfish ends. Our tables were offered free to any who would exhibit, and the decision of a wise and fair committee, very satisfactorily distributed the prizes offered where they were certainly due. It was therefore with no little surprise that we found notices appearing in one and another of our city cotemporaries, and in the Country Gentleman, reflecting both upon the management, and upon the exhibitors, stating that half the latter were not present in time for the examination, greatly extolling the berries of Prince & Co., and giving the impression that the fruit of those who came too late by far surpassed the others. Nothing could be more false, for not a single person who intended to show for a prize, failed to have his berries here promptly. We have traced these lying notices to their source; of their author—a man who would benefit himself by detracting from the fairly won laurels of others—we have nothing to say; but must express our surprise at the ungenerous notice, which our usually *gentlemanly* agricultural cotemporary gives "The Strawberry Exhibition in New-York."

LIST OF ENTRIES.

Prof. Huntsman, Flushing, L. I.—Seedling

John Rassbach, West Bloomfield, N. J.—Ward's Seedling.

Mrs. M. Pryer, Newtown, L. I. —Wilson's Albany.

Parsons & Co., Flushing, L. I.—Cutter Seedling, Triomphe de Gand.

Patrick Ryan, gardener to J. B. Colgate, Esq., 47 Wall-st., New-York.—Trollope, Triomphe de Gand, Austin.

H. E. Legg, Kingston, N. Y.—Wilson's Albany.

John Drummond, gardener to Mrs. J. H. Strong, Flushing, L. I.—Black Prince, Wilson's Albany, Jenny Lind, Triomphe de Gand, White (Bicton Pine), 3 large berries.

Wm. A. Burgess, Glen Cove, L. I.—Four new seedlings —No. 8 A, No. 8 B, (Garibaldi), No. 8 C, (Gen. Scott,) No. 8 D, (Little Monitor).

G. H. Banta, Tappantown, N. Y.—Wilson's Albany.

E. & G. Marshall, Poughkeepsie, N. Y.—Wilson's Albany, Great Austin, Triomphe de Gand, Longworth's Golden Seeded, Voorhies' Seedling, Scott's Seedling, Peabody, Ward's Favorite, Monroe Scarlet, Princess Frederick William, Gen. Havelock, Delices d'Automne, Jenny's Seedling, Trollope's Victoria, Pyramidal Chilian, Hovey, Wiley, Fragrant Scarlet, Westchester, Bicton Pine, Scarlet Magnate, Elton, Dundee, Huntsman's Pistillate, Duchesse, Feast's Fillmore, Imperial Scarlet, Duc de Brabant, Iowa, McAvoy's Extra Red, Hooker, La Belle Bordelaise, Black Prince, Brighton Pine, Walker's Seedling, Boston Pine, Madame Louese, Crimson Cone, Downer's Prolific, Prince's Climax, Large Early Scarlet, Ohio Mammoth, Bullett, Chorlton Prolific, Genesee, DeTiury, Jenny Lind, British Queen—(48 varieties.)

E. Williams, West Bloomfield, N. Y.—Triomphe de Gand, Ward's Favorite, Hovey, Wilson's Albany, Trollope's Victoria. (variety for name.) Great Austin, Scott's Seedling, Honneur de Belgique, Duc de Brabant, Iowa, Black Prince, Genesee, Ward's Favorite, Boston Pine, Moyamensing, Jenny Lind, Early Scarlet, Pennsylvania, New Richmond, Monroe Scarlet, Orange Prolific, Scarlet Cone, Crimson Cone—(25 varieties).

Wm. F. Heins, Woodstock, N. Y.—Hooker, Sir Harry, Triomphe de Gand, Great Austin, Victoria, Langstroth Improved, Wilson's Albany, Pyramidal Chilian, Cutter's Seedling, Longworth's Prolific, Scott's Seedling, Chorlton's Prolific, Jenny Lind, Boyden's Mammoth, McAvoy's Superior, Peabody, Ladies' Pine, Scarlet Runner, Bartlett, Early Scarlet, Downer's Prolific, Le Baron, Walker's Seedling, Prince Diadem, Athlete, Vicomptesse Hericart, White Pine Apple, Albion, Lennig's White, (new seedling, 2 seedlings for competition of flavor—(32 varieties).

C. S. Pell, N. Y. Orphan Asylum.—Wilson's Albany, Great Austin, Triomphe de Gand, White Alpine.

Wm. H. Goldsmith.—Hooker.

A. S. Fuller, Brooklyn, N. Y.—Seedling, Triomphe de Gand, Trollope's Victoria, Downer's Prolific, Deptford White, Duke de Malakoff, Monte St. Julien.

Solon Robinson, Yonkers, N. Y.—Wilson's Albany.

Wm. Kearns, gardener to Wm. Shaw, Clifton, Staten Island, N. Y.—Longworth's Prolific, Wilson's Albany.

John Boyce, Fishkill, N. Y.—Triomphe de Gand—(three large berries).

C. M. Saxton, N. Y.—Mead's Seedling—(exhibition.)

J. C. Thompson, Staten Island, N. Y.—Downer's Prolific, Great Austin, Triomphe de Gand.

J. Noble, Bowronville, Brooklyn, N. Y.—Four varieties.

W. R. Prince & Co., Flushing, L. I.—Ariadne, American May Queen, Great Austin, Chili Hybrid, Diadem, Bowner's Prolific, Fortunatus, Hooker, Hovey, Hudson's Bay, Fillmore, Globose Scarlet, Imperial Scarlet, Iphigenie, Jenny Lind, Ladies' Pine, Longworth's Prolific, Le Baron (Pine), Malvina, McAvoy's Superior, McAvoy's No. 1, Ophelia, Perfumed Cone, Primate, Prince's Late Globose, Scarlet Melting, Scarlet Prize, Scarlet Magnate, Sirius, Scarlet Globose, Barnard's Illinois, Stewart, Supreme, Victorine, Welcome, White Pine Apple, Seedlings (No. 1, 12, 13, 15, 18, 21, 22, 26, 28, 34, 38, 42, 45, 48), Bijou des Fraises Hautbois, Belle Bordelaise Hautbois, Male Hautbois, Green Pine Apple, Alpine Monthly White, La Mendonnaise Alpine, Montreuil Wood, English Ladies' Finger, Comptesse de Beaumont, La Sultane, Lucas, La Constante, Marguerite, Orb, Oscar, Prince Imperial, Rifleman (Ingram), Vicomptesse Hericart, Wizard of the North, Empress Eugenie, Triomphe de Gand—(57 varieties, besides the seedlings) (for exhibition.)

An Amateur.—Scott's Seedling.

George F. Meyer.—Hovey's Seedling.

L. M. Pease, N. Y. Farm School.—Triomphe de Gand, Wilson's Albany, (very superior).

D. P. Usher, Staten Island, N. Y.—Peabody.

Wm. Parry, Cinnaminson, N. J.—Triomphe de Gand.

F. P. Sanford, Orange, N. J.—Triomphe de Gand.

Mr. England, Bushwick, L. I.—Gooseberries.

Alfred Waller, Brooklyn, N. Y.—Whitesmith's Gooseberries.

A. S. Fuller, Brooklyn, N. Y.—Cherries for name.

Charles Mandeworth, Dutchess Co., N. Y.—Cucumbers.

A. Bridgeman, New-York.—Six pots Gloxinia, very beautiful.

What Blackberry shall we Cultivate?

None, say we, very decidedly, unless you have room for them, and will take care of them. We have plenty of wild fruit, in most years, of very fair quality, and unless we can get a steady supply of a superior article in our gardens, it were better to plant them with cabbage and sweet corn. These are certain to have room enough, and to be cultivated.

We are afraid many who have purchased plants, the last few years, under the inducements of pictures and advertisements, have made poor investments, not because we have any doubts of the excellence of the fruit, but of the good sense and skill of the purchasers. It will take years of experience and choked plants to get rid of the popular notion that, because a blackberry plant takes care of itself in the pasture, it will do the same in the garden, and yield good crops. It will do nothing of the sort. Neglect the best variety, and it will give not much better results than wild plants—a little fruit on one plant out of a dozen, in years of average moisture. We say then, unless you have a place in your garden that you can give up entirely to this plant, do not waste time and money in buying plants. They should be attached to trellises or wires, as this supports the lateral shoots much better than stakes. Most of the fruit grows on these laterals, and where they do well, they need support on account of the weight of the fruit. Trained in this way, it is easy to do the shortening-in at this season, with the thumb and finger, and to throw the energies of the plant into fruit-buds for next season.

The New-Rochelle very generally does well, and gives satisfaction to pains-taking cultivators. It is acid if picked before ripe enough to drop off, and it decays if neglected too long—the canes are sometimes winter-killed—charges that may be brought against other very good varieties of fruit. The fact that it has become so widely disseminated in so short a time, is a pretty good test of merit. It, however, fails in some soils and climates, with the best care.

American Forest Trees.

A little examination will serve to surprise one at the richness of our North American Sylva. We would by no means disparage trans-Atlantic good things; but when our own vast continent furnishes us so many species and varieties of trees, and some of them the grandest in the world, let us not overlook them in the search for foreign novelties.

It will surprise those who have not looked into this matter, to find that many rare trees, with strange-sounding names, are natives of our own land. Among conifers, take the following: *Pinus flexilis*, *P. ponderosa*, *P. monticola*, *P. Sabiniana*, *P. Lambertiana*, *P. insignis*, etc., are natives of Oregon and northern California. *Thuja gigantea* comes from the Rocky Mountains; *Juniperus occidentalis*, from Utah; *Abies Menziesii*, from Sitka, lat. 57°; *Cupressus Nootkaensis*, from the region about Nootka Sound; *Abies Douglasii*, *A. nobilis*, and *A. amabilis*, from Oregon, between lat. 43° and 50°; *Abies bracteata*, and *A. Williamsonii* lie a little further south than the foregoing. Near the sea, and in lat. 41°, we find *Cupressus Lawsoniana*, and *Sequoia sempervirens*, (California Red Wood,) and on the mountains of the same latitude the *Sequoia gigantea*, the famous Big Tree, called also *Wellingtonia* and *Washingtonia*.

These will serve as specimens taken from a single department; and there are many more, hardly less remarkable. Now, it gives one the sense of a new possession, and a feeling of patriotic pride, to find that such trees are American.

Another interesting discovery is, that some of these trees, though of northern origin—some of them even found along the snowy ridges of Oregon—are yet somewhat tender when transplanted into the same, or a lower, parallel of latitude at the East. Taking our illustrations again from among evergreens, here is *Thuja gigantea*, from the Rocky Mountains, in lat. 53°, but when set out in the neighborhood of this city, in lat. 40° or 41°, it is represented as "not quite hardy." *Abies Menziesii*, found at Sitka, lat. 57°, is cut up by the winters of lat. 43° at the East; *Abies Douglasii* grows wild on Vancouver's Island, lat. 50°, yet it can not be relied on here, in lat. 48°. Yet, again, strange to say, *Pinus ponderosa*, found in the interior of Oregon, north of lat. 50°, is as hardy all over our North-Eastern States as the native hemlock. The same may be said of *Thuiopsis borealis*, found wild north of lat. 50°. *Pinus Lambertiana*, found between 42° and 43° bids fair to succeed in the same latitude at the East. *Cupressus Lawsoniana*, found lower down, and near the Pacific coast, is trying hard to be hardy in the same latitude on the Atlantic.

Here we have a few instances, out of many, of a general fact, that the hardiness of a tree or plant can not be positively determined by the latitude or longitude in which it is found indigenous. Many circumstances go to determine its hardiness. It is affected much by its geological position, not a little, also, by its altitude above the level of the sea, by the prevalence of certain winds, by the amount of moisture in the atmosphere, by the protection of surrounding hills and forests, and other unknown and imperceptible causes. If, then, we wish to ascertain whether a certain, untried tree is hardy or not, we may form some *conjecture* from the latitude in which it is found, but can arrive at *certainty* only by a fair *experiment*.

This, too, should be borne in mind by every planter. In transporting a tree from one part of the country to another, he will be very likely to fail unless he surrounds the tree with nearly the same conditions of soil, exposure, etc., as it had in its original habitat. Take this familiar example: the *Kalmia latifolia*, and *Rhododendron maximum*, and American Holly, all grow wild north of 43° in New-England; but if we remove them south of that line into New-York, and yet give them unsuitable soil and aspect, they will dwindle away and perish. Unthinking persons will suppose they are "too tender for the climate," when in reality they are hardy enough, but are mismanaged.

In the foregoing paragraphs, we have only touched on a few points of interest in this subject, and must leave them for our readers to follow out at their leisure. At another time we shall return to the inviting theme.

A Hint to Tree Fanciers.

In our random experiments, last Spring, we met with a result which both surprised and gratified us. A Scotch larch, which had been planted in a certain spot, several years before, had become too large for the place it occupied, and must either be removed or cut down. What was to be done? A council was called, and soon a compromise was agreed on, for at least one year. The plan was to let it stand, but to head it in several feet at the top, and to shorten in the side branches full half their length. Heretical treatment, surely, but we gave it, and then waited results.

The tree being in a distant and secluded part of our grounds, we did not notice it particularly until about the first of June, when its appearance surprised us. The foliage had come out with unusual strength, and clothed the tree in a mass of heavy, rich verdure from top to bottom. We had trimmed it into a tapering or conical shape, like the Juniper, or Lombardy Poplar, and now it was a beautiful, thickly tufted shaft of the most vivid green, altogether unlike the tree as commonly seen. The leaves were fully double their usual size, being nearly as long as those of the Austrian pine, and of the same color, only glossier and brighter. Not an inch of trunk or limb could be seen amid the mass of leaves. At a little distance it resembled a fine specimen of the Austrian pine, pruned into the Juniper form. It is now one of the most remarkable sights in our grounds, and we congratulate ourselves on the discovery. *

Where to Feed Trees.

It is no uncommon thing to see a little circle dug around large fruit and ornamental trees, and a heap of manure applied. Perhaps this boys' play does no hurt, but what good does it do? We might fancy the old tree looking down upon the workman with a sort of disgust and indignation, and saying: "What are you about, Sir? Are you thinking to benefit me by scratching around my bole? No, no, Sir: my roots are out yonder, many feet away; my thousand mouths are far off, open and waiting for the food which they can not get so long as you confine it to my senseless trunk."

Any person can see a good illustration of our point, if he examines the grass under an oak or ash, or other gross-feeding tree. If the soil is rather poor, he will find the grass brown and dried in mid-summer; and the dryness will be greatest at the ends of the roots. This circle will enlarge every year, the roots exhausting the nutriment of the ground as they extend.

Now, obviously, the way to treat such trees, and all others that we wish to thrive, is to manure and till the ground all over the surface of their roots, but more especially at the extremities, for it is there that they take in the most of their food. This is the very best way, but the next best is to manure the entire surface of the grass above the roots once a year; the nutriment will much of it find its way down to the roots.

Potatoes Mixing in the Hill.

Some errors have more lives than a cat. Kill them thrice dead, and bury them, yet they will not stay dead. The above notion is one of these instances of persistent resurreetion. We shall not stop now to do anything more than hit the thing a rap, and then pass it by.

It would seem plain to every mind that no plant can "mix" through its branches and roots. Set the elm-tree in the same hole with a beech, and let their roots and branches grow and twine together for a century, and will there be any mixing of the two? Or let a red elm and a white elm grow side by side, or a red and white beech, and will either, in process of time, become streaked? Who has not seen the red and white peony growing side by side for many years without any mixing? And the same may be said of any plant which is propagated by divisions of the roots or tubers. Now, the potato is a tuber, like the peony. As we plant it, it is not the seed, but the tuber. And it will no more mix through this root than the peony through its. The only possible way of mixing this or any other plant is through the flower and seed.

When different varieties of a plant, (say the peony, potato, or what you will,) grow side by side, and blossom at the same time, the pollen of one flower is often blown, or carried by bees, to other flowers, and thus produces a cross fertilization. The stigma of one blossom is impregnated by the pollen of another blossom; then the seed is matured and ripens. Now plant this *seed* (not the *root*, remember, for that has not been affected at all,) plant the *seed*, and we shall be likely to get a new plant having a mixture of the two varieties. Thus, if we sow the seed-balls of our potatoes, we shall doubtless get a mixture of varieties, but we may plant pieces of their roots to all eternity, and there will be no mixture. Indeed these roots are not real roots, but only enlargements of the branches.

But some persons reply: we don't care a fig for science; for we have *facts* to prove that potatoes do mix in the hill. And here, a cotemporary well observes: "No theory, however absurd, can be started, but some are ready to furnish proof of its correctness from actual observation. Had the Messiah presented the question to the people of this day, which he did to the Jews some 1800 years ago,—'Do men gather grapes of thorns, or figs of thistles?'—some would be ready to reply in the affirmative, and declare that they had seen it done." So now, men have *facts* ready to prove that wheat changes to chess; the influence of the moon's rays on vegetation and pork; and that potatoes mix in the hill.

Let, however, a few other facts be noted, which throw some light on our subject. A parti-colored potato, if planted for a few years in a sandy soil, becomes lighter, and darker if grown in a heavy, clay soil. Plant only the light colored parts of the mercer, and the crop will be chiefly white. Plant several sorts of potatoes in the same field for several years in succession, and the finer varieties will be found mingled among the coarser, because the latter always

produce more abundantly than the former, and will get mixed with others, by careless hands. Sometimes a lot of one kind of potatoes is left in the ground over Winter, and next year we find them mixed with others—"mixed in the hill," indeed. Then, in the haste of gathering and housing, it is not strange that one sort gets mixed with another. And then in the Spring planting, when the different kinds are cut up and carried to the field, hired men will sometimes mix the kinds without knowing it. In fact, it is almost impossible to prevent this where small potatoes are used for planting, because the kinds are then not easily distinguished. *Facts* will always show that potatoes do not mix in the hill, unless it is done by the planter.

Celery in the Trenches.

It is much the best way to get a winter supply of this delicious salad, to make late plantings any time this month. Nothing is easier, after you learn how, than to grow it in perfection, tender, crisp, and juicy. The more rapid its growth the better. No plant delights more in moisture, and if the trenches are in well-drained soil, it is well to water copiously every other day. Stir the ground often, and do not begin to earth up much until the plants are a foot high or more. If the plants show any lack of vigor, top dress with compost from the sty or hennery.

Bare Spots in the Garden.

Sow them with spinage early this month, and you will have greens in September. If sown the latter part of the month, and covered with straw, prairie or sedge hay, a nice spinage bed is ready to be drawn from in May and June. Or the vacant places may be sown with quick growing flat turnips for late Fall use or for feeding. Even ruta bagas will grow to a good eating size if sown on rich soil the first of August. Radishes and lettuce may be sown at any time during the month for a late crop, and black onion seed may be sown late in August, or early in September, and left to grow thickly for seed for early rare-ripes in the Spring. Peas may still be sown, with a reasonable prospect of a crop before frost. Asparagus may be sown as soon as the seed is ripe, and one year will be gained in the future growth, as good strong roots will be ready to transplant one year from the following Fall or Spring.

Natural Products of Colorado Territory.

BY A COLORADO FARMER.

Grasses.—These are divided into lowland and upland: of the former there are two species—the jointed, coarse, tall, and the broad-leaved and soft. They are both cut for hay. The upland, are the bunch, and buffalo grass. Besides these we have wild oats, barley and rye in the valleys and on the mountains. I have seen the latter 6 feet high, with heads 12 inches long, at an altitude of 9,000 feet above the Missouri river. The oats, barley and rye are not worth cultivation.

Our highland grasses have a peculiarity unknown in the tame grasses. They ripen and cure on the ground, retaining a large part of their capacity to sustain and fatten stock. We can show you any day in Denver market, beef fatted on grass, and fed during the whole Winter on dry grass, equal to any grain and stall-fed cattle East, and doubtless more healthy. Fifty pounds kidney fat is not extraordinary here; this too from cattle worked across the plains the same year, and all our cattle are selected for work and not for beef. Poor stock of all kinds not only live through Winter, but absolutely fatten on our dry grasses.

Our cows show the superiority of these grasses in the quality of the milk. No better butter can be produced on the continent than here. I have a cow which has been milked all Summer, and all Winter, so far, without feeding hay or grain, and to-day she is fit for the knife. It may be added that she has had no shelter for two winters. At this date, January 8th, cattle teams are almost daily arriving in good order, having drawn loads 700 miles over the plains and subsisted on dry grass alone. If these statements are correct, you see how little feed is necessary for unworked stock.

The principal and best of these grasses is the Buffalo grass, so-called from the fondness of our wild cattle for it. I esteem it almost equal to oats in the sheaf. When it can be had stock leave all others and go miles to obtain it. It grows thriftily on the lower range of mountains and is greatly improved by proper soil and culture. In favored spots it produces a crop for the scythe. It is eminently adapted to our soil and climate; the roots retain their vitality in the dry sandy soil during all the fore part of the season, until the periodical showers come, when a seed stalk is thrown rapidly up, from 6 to 18 inches, bearing one to three small seed heads, standing at right angles to the stalk. There are no blades on the stalks, while the body of the grass is too short for any thing but sheep. This and other grasses are the principal reliance of our stock Summer and Winter. I think the Buffalo grass is, in many respects, superior to the famous blue grass; for winter feeding for sheep it has no equal, always furnishing food when the snow is off or not immoderately deep. It is certainly worth a trial, and if it grows well north and east, would be a valuable acquisition. I have demonstrated its capacity for improvement, and am well satisfied that it is eminently adapted to sandy and dry soils. Here it gets a little snow in Winter, and no rain in Summer, except about 4 weeks. I wish you could see the mutton fattened on this grass; you could form so much better an estimate.

Fruits.—*Raspberry.*—Mountains and valleys. Chiefly in the mountains, north-hill sides and burned districts. Berry red, juicy, good size, sometimes quite large, flavor excellent, prolific, continuing in bearing 5 or 6 weeks, 6 to 18 inches high, improved by culture,—excellent fruit, worthy of adoption. Will send you some berries if possible.* A superb wine is made from them. In the natural state they yield immensely.

Currants.—Black, Yellow and Red. The red is sweet—small—growing in the mountains, prolific, but of doubtful utility. Black and Yellow, large, thick skin, slightly astringent and very sour until fully ripe—about equal size, large berry, prolific, greatly improved by culture, and pleasant when fully ripe. I esteem the black best, and consider them superior to any of the cultivated varieties. But few are allowed to mature, as our people are crazy after fruits in the Summer. The specimens I send are from a stunted bush in dry ground.† The bushes frequently grow 6 to 8 feet high, and furnish fruit 5 to 6 weeks. A valuable acquisition. I may add here that all native products are hardy.

Cherry.—Commonly called Choke Cherry, but really a pleasant fruit when ripe; free from insects, size of large wild cherry, black, heart-shaped, bushes 10 inches to 10 feet high, prolific, and really more pleasant than the morello. Only valuable in the East as a curiosity.

Gooseberries.—Abundant, small, acid, black of no account. Our climate is admirably adapted to gooseberries. No mildew here.

Plums.—Some pretty good ones. Trees small, poor bearers, useless except here.

Thorn Apple—small, no account. *Hedge Thorn*—A splendid specimen of thorn bush, hardy, excellent for hedges.

Our fruits commence ripening in the lowlands first, and proceed gradually to ripen up into the mountains until cold weather stops the process. We have as yet none of the yellow cucumber bugs—the first season there were no small black turnip bugs, but last season they consumed every thing in their line.

We are sometimes troubled with grasshoppers too numerous to count; last season they could be gathered by the barrel. But these annoyances happen also in other countries. All we want is the general culture of staple products to reduce the price of living, and justify the application of labor to the working of the immense "placer diggings," to make this one of the richest mining countries in the world. We may yet attain this reputation with our present high prices for food, as new discoveries of leads and gulch diggings are made all the year through; this year promises better in every department of mining than any former year. At present all our gulch mining is done on separate claims, at great disadvantage. But we have organized one joint stock company which will demonstrate the practicability and economy of wholesale mining, and a new era in the product of gulches.

J. B. Wolle.

* Berries received, flavor good, but in the transportation, converted into "jam."

† The currants arrived in good order, and are as represented.

Sandwich Island Correspondence—II.

HAIKU SUGAR PLANTATION.

Makawao, *Honolulu Islands, 4th month*, 15th, 1862.

Increased attention is of late being given to the culture of the sugar-cane upon these Islands. The soil and climate are well adapted to its culture, and since the trouble in the sugar-producing regions of the United States has laid an embargo upon their products, new fields are sought, and it would not be surprising if some of these Islands should yet produce a large amount of sugar for export. In a recent visit to the Haiku Sugar Plantation, under the charge of G. Beckwith, from Massachusetts, I was shown over the place, and through the buildings for manufacturing the cane into sugar. The mill and boilers are new, of approved patterns, and capable of turning out about 4,800 pounds of sugar daily. The refuse cane, or bagasse, passes from the mill to the furnace, and forms nearly three-fourths of the fuel used. The plantation embraces about 7,000 acres, only 700 acres of which are now in cane. Nearly all of the work on the plantation and in the mill is performed by natives, under the charge of overseers. The laborers receive $6 to $8 per month, including their board. The sugar is put into half barrels or kegs, holding about 112 pounds each. The kegs themselves, or the prepared materials from which they are set up, are manufactured in New-England, and shipped here in bundles or shocks. The mill is near the shore, upon the bay of Mariko, where small vessels take the sugar on board for Honolulu, to be subsequently shipped to California and Oregon.

Besides the Haiku plantation, there are three others on the island of East Maui, whilst many cultivators raise small patches of one-half acre to three or four acres of cane, and take it to the plantation mills for manufacture. The yield is from one to three tuns of sugar per acre, the wholesale price of which is 6c. to 8c. per pound. Joel Bean.

The Raspberry.

The season of bearing, now nearly or quite over, is a time when the canes are apt to be left to take care of themselves. It is not easy to realize that the grass and weeds that are allowed to spring up between the rows will injure the crop for next year. These should be kept down by frequent hoeing or raking, and if the canes are not vigorous, manure should be applied, either as a surface dressing or in the liquid form. The plants, however, should not be stimulated later than the first of September, as it is highly important that growth should cease and that the wood may be well ripened, whether the canes remain above ground, or are slightly covered.

The finest varieties of this fruit in general cultivation are the red and white Antwerp, Fastolf, Orange, Cushing, French and Franconia. These are good enough in some localities, especially in the valley of the Hudson, and if they did as well every where as in favored localities, nothing more perhaps could be desired. But the raspberry is not so easily suited with soil and climate as the strawberry and blackberry. Very little has been done to improve this fruit, until quite recently, and for eight of the thirty four varieties in Downing's list we are indebted to Dr. Brinckle of Philadelphia. It is altogether probable that new varieties are yet to be originated, better adapted to their native localities than any thing we now have. This is a very promising field for amateurs.

The production of new varieties is not difficult. The birds are helping in this work, and it is not infrequent that new seedlings are found in gardens that can be traced to no other origin. If these chance plants that spring up by the fence, or in secluded spots in the garden, were oftener saved, we should have a much larger list. We are indebted to a chance seedling for the best berry upon our own premises.

The raspberry delights in a moist vegetable loam, deep and rich. Its native locality is upon hills and mountains, growing abundantly in ravines where there are large collections of leaves. Wherever the forest is cleared up, the raspberry soon makes its appearance and often covers the land. The whole Green Mountain region is so abundantly stocked with this fruit, and the wild fruit is so fine, that it is undoubtedly a hinderance to their cultivation in gardens. That is the best variety for you which will do best in your garden, whatever the books may say. As a special manure for this plant nothing can be better than the soap-suds made in the family. For methods of training, laying down, etc., see June number.

Cherries.

We are in no danger of over-estimating this delicious summer fruit, coming as it does in the heat of Summer, tempting us with an infinite variety, both in form, size, and flavor, hardy beyond any other kind of stone fruits, and adapted equally for the dessert and culinary purposes. We seldom give consideration enough to the value of the cherry as an ornamental tree, and in a selection of varieties this is most important, at least so far as to enable us to place the ornamental varieties where they will most adorn our grounds and gratify good taste. The Black Tartarian, one of the finest of the black hearts, is pre-eminent for the beauty of its foliage and habit. In the classification of cherries there is considerable difficulty, the various groups run so imperceptibly into one another. At first it was easy to see four groups: Hearts, Bigarreaus, Dukes, and Morellos. We now see in the newer varieties the hard-fleshed Bigarreaus gradually shading off to half-tender and

Black Tartarian.

Elton.

tender-fleshed Hearts, and those otherwise of the Heart character possessing peculiarities of the Bigarreaus. So, too, the sweet Dukes and sour Morellos—very similar in the rounded habit of the trees, and in bearing fruit on both the old and new wood—blend by almost imperceptible approximations, but the character of sweetness or sourness remains as a convenient distinction. These groups, Dukes and Morellos, are by far the hardiest of the species, flourishing both at the north and south where the others fail.

Early Purple Guigne.

We may take the *Black Tartarian* as a sample of the Heart cherries. We give a cut of it with the more pleasure, because it stands so high in public favor, and is so worthy of cultivation for its many excellences. We have specified the beauty of the tree. The fruit is very large, with an angular or uneven surface, the skin of a brilliant black, or purplish black color, the flesh purple, half tender, and very juicy, bearing transportation perfectly; the flavor rich and sprightly. It ripens among the earliest black cherries.

The *Elton* fairly represents the Bigarreaus, and is an exceedingly fine fruit, ripening nearly as early as the preceding. The fruit is large, yellow in the shade, but beautifully mottled with colors on the side exposed to the light; of a pointed heart-shape; flesh yellowish, firm, but when fully ripe, tender and juicy, with a sweet and very rich and agreeable flavor. The tree is a vigorous grower, somewhat drooping in habit.

The *Early Purple Guigne*, (pronounced geen), is the earliest of cherries, ripening in this latitude about the first of June in some localities. The tree has little beauty, but by pruning while young, may be made to take a pretty good shape. The fruit is early and excellent, heart-shaped, color dark purple when ripe, flesh dark, juicy, sweet, and well flavored. The stem is very long, and inserted in a narrow basin. This is found to be a favorite variety at the West.

The *Belle de Choisy* is a very delicious cherry, and a pretty fair example of the Dukes, the tree having the low, round-topped habit of this group, and the fruit the round and slightly depressed form. Skin thin, yellow, and mottled with pink, or red, on the exposed side. Flesh amber-colored, stained with pink; sweet subacid, rich. It ripens about the first of July.

Morellos.—As a type of the Morellos, or pie cherries, we give the Early Richmond. The tree is round-topped and spreading, and very productive; the fruit of medium size, round, borne in pairs, the calyx usually adhering around the short stem. Skin red, becoming dark-brown if it hangs long. Flesh reddish, juicy, very sour, but of an agreeable flavor. The fruit remains on the tree ripe during the entire month of June, and even later. It is an invaluable fruit in every garden for culinary uses.

We have here given a few of the most desirable sorts of cherries of quite distinct characteristics—there are others which should be added to a list of trees to plant. One of the great charms of the fruit is the variety which we may easily possess. In addition to those already

Belle de Choisy.

Early Richmond.

named, we add: Belle d'Orleans, Gov. Wood, Coe's Transparent, Bigarreau, and Great Bigarreau, Black Eagle, Downer's Late, and Carnation.

The Currant.

This is the fruit of all others for dog-days. Most people have a very strong craving for its acid, and this, perhaps, is a good indication that it meets some want in the system. "Souring the crop" is the very expressive term by which the farmer boys indicate a feast of this fruit. It should be provided by every one who has room to grow the bushes. It is more hardy than almost any other of our fruit-bearing shrubs, bears fair crops without much coaxing, and is, with generous treatment, loaded every year.

There are some twenty five varieties in cultivation, each good for some particular qualities. But most of them are little if any better than the old red and white Dutch so widely known, so that he who has these may well be content. La Versailles has large, long bunches, and is among the best of the new varieties. The Cherry currant is distinguished for its size, and its acidity. It is not so generally known as it should be, that this shrub rejoices in a rich clay loam. Where it does not flourish, clay would make a good amendment to the soil. The fruit

can be increased in size and quality, by training upon wires or as a tree, but it does so well in its natural bushy form, that few will be at the pains to change it. Currants are frequently grown by the acre for market, and the results compare favorably with those of the other small fruits.

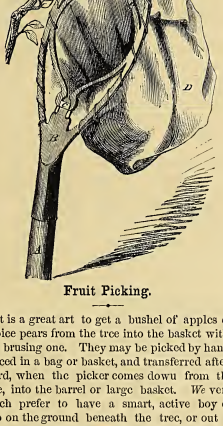
Strawberry Farming.

It is only within a few years that the cultivation of the small fruits on a large scale for market has been much pursued in this country. Now, however, strawberries, currants, blackberries, raspberries and cranberries, are cultivated in plots of many acres in extent, and ordinarily realizing to their owners great profits compared with the investment in land, labor, etc. At the recent strawberry show at the office of the *American Agriculturist*, among the berries showing the best cultivation, were some splendid Triomphe's and Wilson's, from Rev. L. M. Pease, of the New-York Farm School, near Mt. Vernon, Westchester Co. This farm we visited, and it has many points of interest besides the strawberries.

Mr. Pease is widely known for his beneficent and successful exertions in behalf of poor children of this City, he having given the character to the Five Points Mission, and House of Industry, which he may almost be said to have founded. Seeing the need of giving poor children a means of *earning* a respectable livelihood, he some years since purchased this farm and turned it over to the "House of Industry," when that body was incorporated, by which institution it is now leased to a Board of seven Managers of the most prominent benevolent citizens of New-York, of whom Mr. Pease is one. The Farm has been cleared of rocks, bushes, fences and water—the rocks buried and made into drains, the bushes and fences, except the stone walls, burned, the water gathered into pools at different levels to serve as reservoirs for irrigation. This he is preparing to conduct on an extensive scale, and now uses the water with marked advantage in some extensive strawberry beds. On this farm, in connection with other ordinary farm crops—corn, potatoes, rye, oats and grass—there are some five acres of strawberries in bearing and several more which will come into bearing next year. The varieties are chiefly Wilson's Albany and Triomphe de Gand. We estimated the yield at about 300 bushels to the acre, and Mr. Pease thinks that certain parts will yield at the rate of 400 bushels of Wilson's Albany.

The culture of these strawberries, except the preliminary preparation of the ground which is very thorough, is done entirely by boys from 12 to 15 years old, and we have never seen strawberry beds cleaner or more flourishing, and we may add, we never saw such a profusion of fruit of a uniform, large, or above medium size. On a single plant 2 years old, taken at random, we counted more than 200 berries, green and ripe. In general, they are planted 14 inches apart with 18 inches space between the rows. Grass and other farm crops showed excellent culture and looked finely. Mr. Pease uses an abundance of manure both from the stall and compost heap, and besides purchases fertilizers. He says he can not afford to farm without plenty of manure, and if he can not make all he wants he must buy it.

The boys are encouraged to diligence by certain privileges and payments depending upon their steadiness and efforts. They each have garden patches to cultivate of their own, according to their own tastes. One is trying for the big squash or pumpkin premium at our proposed pumpkin show. Others have constructed unaided a small "green-house," where we found a moist atmosphere and the conditions of rapid growth; but it is too small and will be too much exposed to bear the winter. It would have been better on the south side of a big rock or half buried up in the ground. Happier, pleasanter boys we never saw. They are in a fair way to make good farmers and gardeners. Snatched from surroundings which are the most debasing in this hot-bed of iniquity, (New-York City,) they are saved to themselves and to society. The number on the farm will be increased as fast as work can be provided. A fine new barn has been built, and other buildings are in contemplation.



Fruit Picking.

It is a great art to get a bushel of apples or choice pears from the tree into the basket without bruising one. They may be picked by hand, placed in a bag or basket, and transferred afterward, when the picker comes down from the tree, into the barrel or large basket. *We* very much prefer to have a smart, active boy or two on the ground beneath the tree, or out a little on one side, to catch the fruit as fast as we pick it. This gives the picker both hands, and ability to draw in limbs and pick without jarring, and to take ripe or partially ripe fruit at pleasure. The fruit sustains no injury, if caught, and as it is placed in the basket or barrel, one or two at a time, this is all the handling required. It has no fall, even from a very small hight, and is absolutely unbruised.

Fruit Pickers, however, are of use, and a good one is of great value. There are trees we can not climb into, and others, the limbs of which can not be brought within reach, so it becomes necessary or desirable, to have a means of picking attached to a long pole. One of the best of these contrivances, whose name is *legion*, is the one illustrated above. It is Goodwin's patent, and consists of a light, cast-iron frame, *B*, (bad if it were to drop and hit a stoue,) upon one side of which a bag, to hold the fruit when picked, is attached. An interior part of the frame contracts the opening at either end, and conducts the stem of the apple or pear against a knife-blade *c*, which is intended to cut the stem; if the turning of the picker does not cause the fruit to drop. This will ordinarily occur; and it will be noticed, that a very good leverage to pick the fruit is obtained. The cost of the implement, we believe, is 50 cents.

Packing Fruit for Transportation.

Persons often wish to send packages of nice fruit to distant friends, yet fear it will not reach its destination without being badly bruised in the transit. There need be little fear of this, now that modes of packing are so nearly perfect, and express companies carry and deliver parcels with such care and dispatch. Among the ways of packing, here is one: Prepare a box of suitable size, and provide a quantity of cotton wadding, and several sheets of tissue-paper. Put two layers of cotton on the bottom of the box. Wrap each specimen—be it peach, pear, plum, grape-cluster, or other fruit—in tissue-paper, and lay it on the cotton. If trouble is taken to tuck a bit of cotton between each specimen, it will be all the better. Over the first layer of fruit, place a sheet of wadding, and proceed as before until the box is full: then finish off with a layer of cotton moderately pressed down, to keep the fruit from shaking about. Nail on the cover firmly, and dispatch box to place of destination. The aroma, and even the very bloom of the fruit, will be mostly preserved. Some persons use sweet bran, in place of the cotton, and with excellent success.

What to do with Summer Fruit.

Much Summer fruit is very transient, decaying even before it falls from the tree, and sometimes even before it is ripe. This is true of many pears. Picked, or shaken from the tree and picked over, they make excellent *perry*, which is like cider, but more delicate and winelike. It needs a cool cellar to undergo its fermentation in. Apples should be made into cider. Sweet, it brings a high price in market, and is a delightful cooling beverage, but does not make so good cider as later, when fermentation is less rapid. The small hand mills and presses are very good for pressing fruits, and a family may supply itself with the juices for preservation, and considerable quantities for sale.

Cockroaches and Croton-bugs.

An Entomological correspondent of the *Agriculturist* to whom we asked some questions about these creatures, writes: "It is a comfort to us in considering these nuisances to think that neither of them originated in this country—the cockroach (*Blatta orientalis*) being a native of India, and thence carried all over the world by the aid of commerce, and the croton-bug (*Blatta* (Ectobius) *germanica*), originating in Europe. The croton-bug seems to thrive better in this country than at home, for in our large cities it is found in millions, really taking the place of the prevalent cockroach in many localities. European writers, as far as I have seen, speak of it as not very abundant. We have several indigenous species of Blatta, but, like the aboriginals, they seem to choose the freedom of the woods and fields.

"The cockroach is larger than the croton-bug, the former varying from 8 to 14 lines, and the latter 5 to 10 lines in length. The first is of a rusty brown color—the head with a white dot on each side between the eyes—the wing covers abbre-

viated and truncated at the end in the male, and only rudimentary in the female. The second is a livid yellow color, very glossy, with black antennæ and eyes, and two parallel longitudinal black lines on the shoulders. It seems to take to water pipes rather more naturally than the former. Otherwise their habits are very much alike, both species being fleet-footed, restless and sneaking—having insatiable appetites—not being at all particular as to their diet, 'lovers of darkness rather than light,' fond of grand pow-wows on kitchen floors, and breeding by the hundred thousand. True Ishmaelites, 'their hand is against every man.'

"In New-Orleans I have found domesticated another (tropical) species, which does not yet seem to have a strong foothold in New-York, the *Blatta gigantea*, which is of a livid color, with a large quadrate blackish spot on the thorax. This grows to be over two inches in length, and is the kind about which mariners are wont to discourse. In this climate we have very little idea of the way in which they increase and swarm in the tropics, both on sea and land. On the land nature has provided many destroyers which keep down the surplus stock, such as ants, spiders, and many of the smaller animals. On shipboard, it becomes necessary now and then for every person to come upon the deck, or to go on shore, and to make an intense smoke between decks and in the hold, which kills every living thing within its reach." N.

However interesting the facts about the vermin, as regards their origin, etc., are, there is another class of facts which interests us still more, namely, how to get rid of them. We must, however, beg our readers to bear in mind that where filth, decaying matter, and such like things exist, it is far better that it should be converted into living organisms than remain to foul the earth and air, and pollute the dwellings of men; so by a providential ordering of things, there are insect scavengers provided, which multiply in proportion to the abundance of food they have, and which render innoxious vast quantities of matter which otherwise would be productive of disease and death incalculable. We may regard them then as good friends, though sometimes disagreeably familiar, and uncomfortably numerous. A house infested with roaches or croton-bugs, may be effectually cleared of them by exposing it throughout to a freezing temperature, which is easily done in houses standing isolated, the family leaving it for a few days in cold winter weather, allowing the fires to go out, and giving free ventilation. This is impracticable in cities, and often in the country, where this nuisance is spreading quite rapidly, brought in flour barrels, and provision cases of various sorts. Probably the next best remedy is what is known among housewives as "dry *green paint*," to painters as "*Paris green*." This is arsenite of copper, an exceedingly poisonous substance, of a bright green color. The color is a great safeguard against its accidentally contaminating any thing eatable—which is the great danger with white arsenic, and the poison is so subtile that it affects the insects without their eating it, when dusted about in their runs, in cracks of the wainscoting and floors, around water-pipes, etc. This poison should be used in no larger quantities than absolutely necessary, for when considerable quantities are about the house, especially if it is near warm flues, or hot water pipes, it might affect the atmosphere so as to be injurious. The air of rooms painted or green-washed with it, or covered with paper on which this was the coloring matter, has, in repeated instances, proved highly poisonous and even fatal. There is also an article very generally for sale over the country, as a rat-poison, the basis of which is phosphorus, rendered sweet and palatable, which these insects will eat, and which is certain death; but we place most reliance on the green paint, for this is lasting. It destroys also other insects.

Chloride of Lime.

It is not generally known that the smell of chloride of lime is particularly offensive to many kinds of animals, especially to the common fly, the gadfly, and stinging flies of all descriptions, so obnoxious in stables. A sure means to get rid of these troublesome visitors is to place a vessel filled with chloride of lime upon a shelf, or a board suspended to the ceiling. This being done in the evening, and a window left partly open as an outlet for the flies, none, or very few, will be found in the room in the morning. The smell of chloride is by no means injurious to man or beast; on the contrary it is wholesome as an absorbent of deleterious miasms pervading the air. It need hardly be recommended to repeat the expedient at short intervals, say at least once a week, the more so as it will cost but a trifle and will give no trouble.

In a room—kitchen, pantry or cellar—where chloride of lime is kept, mice and rats will keep off, as indeed they will from any place where the article is used. We have seen the experiment tried very successfully in a large Inn at Nuremberg, long infested with rats and mice, all of which disappeared almost suddenly, not only from the house and outer buildings, but also from the stables and yard.

The use of chloride of lime is not less efficacious for preserving plants from ants, caterpillars and other insects. We have a cabbage field cleared of this nuisance by the simple process of sprinkling the plants with a solution of chloride and water; which may be done by using a common hand broom or a paint brush. To our certain knowledge, a piece of ground sown with white cabbage was thus thoroughly preserved from insects, while in the neighboring pieces the plants were actually destroyed by them.

The same remedy is also applicable to fruit trees which may be preserved or purged from caterpillars, etc., by mixing a pound of chloride of lime with half a pound of lard; this will form a kind of paste, which should be wrapped in tar, and tied to the stem or to the thicker branches of the tree. All insects will drop off almost instantaneously, nor will any be tempted to crawl up again. Even sparrows will keep away if the leaves have been sprinkled as aforesaid.

Experiments are being made as to the efficacy of chloride of lime compared with sulphur as a remedy for the vine disease, and the destruction of the *aphis* or vine-fretter.—*Deutscher Telegraph.*

Material for Pickles.

There is a prejudice against pickles, perhaps it is because boarding-school girls of a sickly hue, are said to dispose of marvellous quantities of them. Whatever the prejudice, it is not well founded. It is a blessed discovery that salt and vinegar will carry over something of the greenness of Summer into the barren Winter. Almost any vegetable preserved in good cider vinegar, (not dilute sulphuric acid,) is a healthful condiment, and aids digestion. There is nothing better than the cucumber, and the vines are full of these now. Pick them while small, and preserve in strong brine. Cabbage makes a good pickle, but we can keep this fresh through the winter, and use raw, which is better. Peppers, the thick-skinned squash variety, are almost indispensable in the pickle jar. We would suggest onions, were not the prejudice against and the love for this Egyptian esculent universal. Then come mangoes, prepared from green fleshed melons, well stuffed with cabbage, horse-radish, nasturtiums, white mustard and spices. This suits us a shade better than cucumbers. Beans in the pod, peaches not quite ripe, butternuts and hickory nuts, in the very green state—and last, but not least, tomatoes make good pickles. This list is extended by other recipes in this number; but these will enable the thrifty housewife to fill the pickle barrel.

String Beans and Green Corn in Brine.

It is not generally known that string beans can be kept in salt, the same as cucumbers. When of suitable size for cooking, pick and string them, and break in small pieces, as for ordinary boiling, and pack in firkins or stone jars, using a layer of salt, two inches in depth of beans, more salt, and so on until the vessel is filled, covering with a good coating of salt. Over this place a board cover, kept down by a stone or other weight. The salt soon extracts sufficient water from the beans to cover the whole with brine, in which condition they will keep for a year, if required. To prepare them for cooking, soak in water over night, and if too salt freshen in more water before boiling. Green corn ears may also be preserved in salt, and when required for use, soak till freshened, and boil.

Cucumbers, for pickles, may be put in with the beans, thus saving an extra firkin; as they are pickled in precisely the same manner, freshening in water, and putting in vinegar, with or without spices before using.

Various Recipes.

Tomato Catsup.—Select well-ripened, smooth tomatoes, boil with a very little water until tender, remove the skin, and rub the contents through a fine wire seive to separate the seeds. To each bushel of the fruit add 3 quarts cider vinegar, 2 lbs. salt, ¼ lb. black and 2 oz. Cayenne pepper, 3 grated nutmegs, ¼ lb. allspice, 6 finely chopped onions, and 3 lbs. brown sugar; boil the whole for 1 hour, stirring it frequently, and strain again through the wire seive. When cold, bottle and set away in a cool place. It is ready for immediate use, or it may be kept a year.

Sweet Pickled Quinces.—The most common use of quinces is as sweet preserves. They also answer a good purpose when sliced up and mixed in small quantities with apple-sauce, giving the whole a pleasant, aromatic flavor. They make a good pickle, also. Boil in vinegar with sugar, and add cloves, cinnamon, etc., to suit the taste. The best way is to pare and quarter them and cut out the cores. Boil 10 pounds of fruit, adding 5 pounds of sugar, and about 4 pints vinegar, one ounce of stick cinnamon, and ½ ounce of cloves. When well boiled, put in a jar and pour over the syrup.

Baked Quinces.—This fruit may be baked like apples, adding syrup, or sugar and water, while baking. Certainly every one who likes a sour baked apple, will relish a baked quince. They are very good simply baked, and eaten with powdered sugar.

To Dry Sweet Apples.—Bake as for the table, then dry in a brick oven. They may be soaked, heated, water dried away, and restored very nearly to the condition of a fresh baked apple. Stewed in more syrup, they make a much richer sauce than the common dried apples.

Peach Jelly.—Pare well-ripened peaches and remove the pits; boil the fruit until quite soft in water enough to cover it; strain through a coarse bag and add 1 lb. white sugar to each quart of the liquid, boiling down until upon trial it stiffens when cooled. If it does not stiffen sufficiently, add a little isinglass. Put in jelly glasses, tumblers or bowls, and paste white paper over them. After setting a short time in the sun, preserve in a cool, dark place.

Blackberry Jam.—Blackberries, in almost any form, and wine made from them, are very pleasant and wholesome, and besides are conceded to be good medicine for the "Summer complaint," and housewives and nurses look out for a good stock of blackberry jam. It is easily made, and there is no difficulty in keeping it. To each pound

of ripe fruit, stewed in a porcelain kettle for five minutes, add 1 lb. light brown sugar, and mash the contents fine with a strong iron or wooden spoon while still upon the fire. When well mixed and boiled 15 minutes longer, stirring it well in the mean time, fill the jars or glasses, and set away.

For the American Agriculturist.

The Farmer's Lot.

What joy the farmer finds!
He views green acres around him lie
Broadly beneath the open sky,
And not a fetter binds
His free and stalwart frame.

No blush or tinge of shame
E'er rested on that cheek of thine,
Or any angry flush of wine,
That sets the blood on flame,
Strong reaper of the grain!

Thy limbs are free from pain,
And thine are sinews stout as steel,
Which, while they keenly feel,
All their young strength retain,
Because thou art a man,

Created on God's plan;
And, like a denizen of air
Living, that chainless joy to share,
Which in those days began,
When Adam trod the ground,—

That sacred soil he found,
So beautiful from God's own hand,
That lovely, green, unwounded land,—
By full fruition crowned.
Blest is the farmer's toil!

He cultivates the soil,
And lives contented with his lot,
Cast in one dear, delightful spot,
Far from the world's turmoil—
And him no avarice binds.

Such joy the farmer finds;
And he will find it to the last,
Till life and all its cares be past,
Its healthful labor done,
And rest immortal won.

Fort Washington, July 7, 1862. PARK BENJAMIN.

The Editor with his Young Readers.

A LETTER FROM MR. JUDD, NOW IN ENGLAND.

LONDON, England, July 1862.

DEAR YOUNG READERS:—When I left home the last of May, I did not intend to write anything for the *Agriculturist*. All my friends thought that I had worked steadily so long that I *must* lay down the pen and rest my brain a little while. I also wanted to devote sometime entirely to gathering information that might be useful in furnishing matter for the paper hereafter. But it seems so long since I addressed you that I shall venture to break over the "rules" and have a little chat with you.....I have seen so much to talk about that I know not where to begin.—Perhaps a few items, gathered here and there, may interest you.—The passage across the Atlantic, in the Great Eastern, was very pleasant. The great ship was itself a constant wonder. In length it will more than reach across a square field of 10 acres. We very frequently took a walk of over a mile by going only four times around the deck. The ship is so wide that three barns or houses each 40 feet long can be set end to end across its middle. With our SMALL load of about 1000 persons, 3000 *tuns* of wheat, 2000 *tuns* of butter, cheese, etc., and 4000 *tuns* of coal, the vessel sunk into the water about 26 feet, leaving 28 feet of her hight still above the water. She would float with the weight of more than 250,000 men on board. Yet, great as is this vessel, with all the weight of the iron of which she is built, of her mammoth engines and other apparatus, she moved along through the water at the rate of 350 to 400 miles a day, (almost as fast as a railway car), and yet as easily and gracefully as a swimming duck or swan. The paddle wheels on the sides, and the screw propeller underneath, never stopped an instant in 9½ days, from Sandy Hook bar New-York, to "Bell Buoy," off Liverpool. When the wind blew hardest against the sails, we could scarcely feel any motion. When there was little wind, the great ocean waves coming *across* our path would gently roll the ship from side to side. Standing on the side then was like being on the end of a see-saw plank, a-going gently up and down once in 10 to 12 seconds. We did not enjoy . e supposed good medicinal effects of sea-sickness....The first three days nothing but water and fog could be seen. Then we crossed the south point of the "Newfoundland Banks." These do not come very near the surface, so that vessels go right on them. At one place we saw nearly 50 vessels catching codfish with long lines let down to the deep banks.—The first day we went directly east from New-York or Sandy Hook; the second and third a little north of east, and the next a little more northward, to latitude 45°, and longitude 45°, after which we steered straight to the south point of Ireland (Cape Clear), which was the first land seen in 8½ days. It took another day to go up the Irish Sea or Channel, between Ireland and the West Coast of Wales and North England. It may interest you to take down your maps and trace out a ship's course across the ocean. Most steamships go a little further north, crossing over the northern part of the great Newfoundland Banks, and passing near Cape Race. We kept a little further south, because in early Summer icebergs, that is, great mountains of ice, come floating down from the North, and ships sometimes strike against these in a thick fog. This is about the only danger in crossing the Atlantic in a good ship during Summer. You will see that when in latitude and longitude 45°, we were only 15 degrees south of Greenland. Even in June the winds came down from the north as cold as a January blast in New-York. We had to put on two sets of flannel, as well as overcoats and shawls to keep warm when walking on deck. During the passage we had meetings, singing concerts, discussions, mock trials, etc., and the time passed rapidly and pleasantly away. There was something very grand in looking out upon the ocean, that seemed to meet the sky all around; and to reflect that the expanse of water was so great that, though moving over nearly 400 miles of it daily, no land was in sight for more than a whole week. What must be the great Pacific ocean! Nearly a thousand ships ply between New-York and Great Britain, yet there was so much room that we saw only five or six of them in our whole trip! As we went up the Mersey River to Liverpool, there was a fine spectacle. Thousands of people came out in steamboats, with flags flying and bands playing, to welcome the Leviathan ship, while for many miles both banks of the river were crowded with tens of thousands of people waving their hats and handkerchiefs, and cheering as we passed. The ships in the river "manned their yards," that is, all the sailors climbed up the ropes, and on to the masts and yards, or cross beams—looking at a little distance like flocks of huge birds in the rigging. Such was our welcome to the Old World.

LIVERPOOL is a pretty large city, containing nearly 400,000 inhabitants. It is 206 miles, by railroad, northwest from London. It is a great seaport, receiving and sending out more than $300,000,000 worth of merchandise every year. It is more closely connected with America than any other city of Europe, over one-third of all its trade being with New-York City. The "Docks" of Liverpool are noted. The tide rises and falls 20 to 30 feet in the river. The chief docks resemble Canal Locks; that is, they are great stone basins or channels, into which ships are floated at high water, and then the gates are shut so that when the tide falls the ships remain floating in the water retained by the gates. At a little distance, the long rows of ships look as if bedded in the soil. When unloaded, and loaded again, the gates are opened at high water, and the vessels are floated out into the river. When they wish to examine or repair the bottom of a vessel, they have only to let the water off through trap doors, as the tide falls, and the vessel is left high and dry. The gates and traps being then closed, the water does not flow in at the next rise of the tide. I shall not have room to tell you more about this city, and can give only a few notes about other cities. I went southwest from Liverpool about 100 miles, to Holyhead, passing through the north part of Wales, and on cars through the great Brittania Tubular Bridge. This Bridge is an iron tube 1513 feet long, over the Menai Straits, from Wales to the Island of Anglesey. It is made of wrought iron plates riveted together, and is so strong that a long train of cars passes rapidly through it, 100 feet above the water. Wales is a hilly country; we passed right under several high hills through tunnels, some of them a few rods and some nearly a mile long. The houses are mostly stone, and few of them are more than one story high. I could hardly understand the people at the railway stations, though they talk the English language. They pronounce words differently from us. The fields are all divided by hedges and ditches, with an occasional stone wall. I never before saw so many crows as abounded all along this route. (*Mem.* All through Great Britain, route is pronounced *root*. They never say *railroad* depot, but railway station. They say coaches or carriages, and not cars. The cars, or coaches, are divided into rooms, with two seats for three persons each, facing each other, so that half must ride backward. A "guard" in uniform, not called a conductor, rides in a forward office or car. Your tickets are shown as you enter a car, you are then locked in, and near the end of the journey the train stops and a station agent comes along, unlocks the car, takes your ticket, and the train runs into the station. There are 1st, 2nd, and 3d class coaches, the 3d class having no cushions, and but poor ones, if any, in the 2nd class. The 3d class fare is about 2 cents a mile; the 2d class 3 to 4 cents, and the 1st class 4c. to 6c. a mile. They have but few 1st class coaches, and these are mainly designed for "Lords" and "Nobles." Americans being all nobleman, and accustomed to good cars at home, generally get in among the "Lords" and "Ladies" of this country.)

Passing by water 60 miles from Holyhead in Anglesey, over to Dublin, Ireland, I spent some time in driving all round the city, but can not stop to describe it. It appears more like New-York than any other town I have seen, except Liverpool, perhaps, though the buildings are mostly built of stone, and the streets narrower, and more broken up and crooked than in New-York.

A ride of about 60 miles through the country from Dublin to Belfast, on the Northeast coast of Ireland, was interesting. The land is mostly owned in large tracts by "nobles" or "lords," and rented out to tenants. The fields are small, and divided by hedges. The country houses are mostly but one low story high, the walls of dried mud, or stone, and covered with thatch, that is a thick layer of straight straw, for a roof. The people appeared contented, but exhibited none of that activity and enterprise manifested in America, where most farmers *own* the land they till. There is considerable hilly and waste, or very poor land. I first saw, here, the digging of turf for fuel. Many women and children (few men) were out cutting up the turf into nice blocks of small size, and piling them up to dry, for burning in the houses. The turf is like the black earth of our swamps, but much more compact or solid. On a single acre there were sometimes 30 to 50 families piling up their heaps.

Approaching Belfast, the great linen town or city, we saw hundreds of acres of grass covered with linen cloth bleaching in the sun. Our finest white linen is woven in the brown state, and bleached afterwards. Flax is largely grown in the neighborhood of Belfast. The manufacturers send it out many miles into the surrounding country to be spun, and much is spun and woven by machinery in the city. I visited one mill where 1,600 men, women, and children were preparing and spinning and weaving flax—people enough for a large village all in one establishment. Much of the linen used in our country comes from Belfast. The great Linen Hall, and the celebrated Ardoyne Mills, where are woven our finest damask table covers, were exceedingly interesting, but it would require too much room to describe them here.

In my next letter I purpose to tell something about Scotland, and the great City of London.

THE STEPPING STONES.—FROM A PAINTING BY J. J. JENKINS, ENTITLED "COME ALONG."

Engraved for the American Agriculturist.

The scene, our young readers will perceive, is one of mountain peasant life. The back ground is charming, the stream widening to a lake, the birds hovering over the quiet waters and the distant mountains. "What a nice place to bathe," we hear some exclaim, and others, "There must be trout in that lake, the waters are so clear." Some will anticipate a little, and think of skating and cutting ice.

But there is something more charming here than the features of the landscape, and even the young folks, who are so full of play, will see it when they look at the faces of the mother and her child. They have been away all day in the grain fields gleaning. The little girl has been helping, and a part of that goodly bundle of wheat is the result of her industry. They are crossing the ford that leads to their home, a place she has been carried over so often, that she thinks she must have help. You see her fear, and the suppressed smile of the mother (whose hands are occupied with the bundle), encouraging her to take the step, and she must help herself or be left behind. The artist has told the story well, and it is for our young readers to apply the moral. —There is a time, but a little while ahead with most of our young readers, when you can not have the help of your parents. They have provided for all your wants, fed you, clothed you, taught you, and done it with so much kindness and apparent pleasure, that you have never suspected how much self-denial and labor were involved in your comfort. You could not live without them, and yet you must soon learn the lesson taught the child in the picture, to *help yourself.*

Parents see and feel this more than you do, and so they lay tasks upon you. Had they always carried you in their arms, you would never have learned to walk. And the habit of self-support, that you are acquiring under the guidance of your parents, will soon enable you to take care of yourselves.

And there are lessons in the picture for our older readers—that mother evidently has confidence that her child will take the steps, and get over safely, and when the little one sees that look of confidence and encouragement in her face, it is worth a thousand warnings to her—she will be as brave and as sure-footed as her mother thinks her. We know of parents who do not expect much of their children. They fret over their short-comings, and have no patience to teach them better. They treat them as if they did not think them capable of doing well, and the result justifies their expectations. If that mother screamed at the child that the water was deep and the rocks slippery, and the current swift, and that she must take care, and acted as if she did not believe she would get over safe, would the little thing have the pluck to venture? Probably not, and if she did she would be very likely to slip.

How powerful is the influence of example. The mother passes on before—the daughter, timorous, yet strong in confidence in the mother, follows on the slippery way across the water. "Come along," the mother says, and so the artist named the picture. Yes, follow thy mother child, in her diligence and frugality, and in all her moral virtues, as well as her sure-footed way across the mountain stream. Be strong to do as she says; be independent to do right, even though unaided and alone. Mothers, so lead your children in safe, right ways, that you can trust them in those things calculated to try their courage and their principles. Then heartily give them that confidence, with your own example, which gives both moral and physical power.

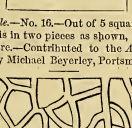
About Kites.

Who ever saw a boy that did not enjoy kite-flying? We never did. It was one of the very pleasantest sports of our boyhood, and we hope all our young readers, particularly the boys, enjoy it too. The kite is a toy which depends upon very philosophical principles. And there is a good deal of skill required to make a good kite and fly it well. This is just the time for kite-flying, for the grass is mown, and the grain is much of it harvested, so that the fields are clear, and there is room enough to raise the kite without doing any injury. A good kite is strong and light—and of such a shape that a great surface is exposed to the wind, in proportion to the amount of wood in the frame. A square kite, or a diamond-shaped one, or a six-cornered one, are each better than a bow-kite, because there is so much wood in the bow, that it is hard to make a bow-kite that will fly well in a light breeze. Whoever makes a kite should take care to make it perfectly symmetrical—that is, just the same on one-half as on the other, just as heavy, and to look the same. Select straight-grained pieces of pine wood, have them of very even size throughout, somewhat flat, and without splits; as light as you think they will do. For a square kite, cross two pieces of equal length at the middle of each. Tie them together with shoemaker's "waxed ends" if you can get them; they will not slip—and it is not best to cut notches or nail them, for this weakens the wood. Then take a stout linen cord, and having notched the sticks on the ends, pass the string around, and tie it as tight as you can and not split or make the sticks bow, and drive a small carpet tack into each end through the string. Next make some paste—which is done thus: Take a tablespoonful of flour, put it in a teacup, and wet it with a little *cold* water, and stir it up till it is as thin and smooth as cream—then stir it slowly into about a teacupful of boiling water in a tin cup, which is kept boiling. This will make a beautiful, smooth, clear paste, and if you stir some fine salt or powdered alum into it, it will keep a long time. When the paste is made, spread a newspaper out on the clean floor, or upon another paper, and lay your kite-frame upon it, then cut the paper about an inch larger all around than the cord. Beginning on one side, spread a thin coat of paste on the edge of the paper, and paste it over the cord; then do the opposite side; then cut the paper at the corners so that it shall fold smooth, and paste the other edges; and finally paste several narrow strips of stout paper across the sticks to keep the paper from tearing off or rattling. Care must be taken to have the paper very smooth and tight, and if the paste is strong, it answers sometimes to dampen the paper slightly but evenly when it is pasted. It will then be tight as a drumhead. To make a diamond-kite, have one stick about ⅗ as long as the other, and let it cross ⅖ from the top of the long one. Otherwise make it like a square kite. A six cornered kite has usually two long sticks of equal length crossed, and one a little shorter, crossing at the same point, which is above the middle of the kite. The prettiest way to arrange them is so as to have the two upper ends of the long sticks, above where they cross, just as long as the ends of the cross piece, and the distance between the lower ends of the long pieces, not so wide as the cross-piece is long.

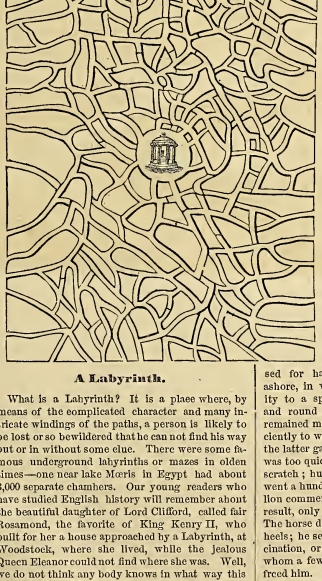
Fasten the line to strings tied to the sticks, going through the paper, so that it may be slipped up and down, and the amount of wind the kite holds may be regulated in this way—the higher it is "hung" the less wind it will hold, but the more it will take to hold it. It must always be hung above the middle, or it will not go up. Woolen list, which may be got at the tailor's for little or nothing, makes the best tails—the length of which must be regulated according to the strength of the wind—and so must the strength of the line also, for a light line will do very well in a nearly still day, but when the wind blows hard, the line must be strong, or the fruits of much labor will be lost. We shall have more to say about kites, and lanterns to send up attached to them, at another time, but now, will only caution you not to make too large ones.

For the Guessers.

Illustrated Rebus.—No. 15.—Above is a Rebus which is a very good one, but it will tax the ingenuity of a very good guesser to solve it. Still some parts of it are very easy, and by patience, we think, it may all be worked out.



Block Puzzle.—No. 16.—Out of 5 squares like this one, which is in two pieces as shown, construct a perfect square.—Contributed to the *American Agriculturist* by Michael Beyerley, Portsmouth, Ohio.



A Labyrinth.

What is a Labyrinth? It is a place where, by means of the complicated character and many intricate windings of the paths, a person is likely to be lost or so bewildered that he can not find his way out or in without some clue. There were some famous underground labyrinths or mazes in olden times—one near lake Moeris in Egypt had about 3,000 separate chambers. Our young readers who have studied English history will remember about the beautiful daughter of Lord Clifford, called fair Rosamond, the favorite of King Henry II, who built for her a house approached by a Labyrinth, at Woodstock, where she lived, while the jealous Queen Eleanor could not find where she was. Well, we do not think any body knows in what way this labyrinth was constructed; but we have received the accompanying sketch of Fair Rosamond's labyrinth, and though the bower in the center in which she is said to have lived has been changed to a temple of Liberty, we think it will please and perhaps puzzle some of the boys and girls to find their way in without crossing a line.

The Play of the Elements.

This is one of those games which sharpen the wits and promote sociability. It may be familiar to some of our young readers, but probably not to many of them. Our young friends know from what we have told them about elements, that air and earth are not elements at all. Yet the Ancient Philosophers considered them so, stating that there were four elements, fire, air, earth, and water, so these are often called *the elements*. The same game is often played and called "*Fish, flesh, fowl.*"

"Let the company sit in a circle; when all are prepared, the beginner of the proceedings takes a handkerchief, and, looking at some one as if he were about to throw it at him, darts it at another, crying "Air!" or (whatever element he chooses, air, earth or water,) "one, two, three. four, five, six, seven, eight, nine, *ten!*" The other, if he be ready-witted, will answer before the numbers are over, "sparrow," or the name of some other inhabitant of the "element" named; but often when taken by surprise, he will stammer, remain in a state of stupid perplexity, or give the name of a four-footed beast as an inhabitant of the air. If he makes a mistake, he pays a forfeit, but at any rate throws the handkerchief in his turn and soon meets with plenty of companions in misfortune, whose forfeits in a pile on the table must shortly be redeemed. This play creates much amusement, and quickens the wits."
MRS. J. F. JENNINGS, Brighton, Mich.

The Horse and the Lion.

The following interesting anecdote is from an article which appeared some time since in Blackwood's Magazine:

"There were some horses on board belonging to Major Kemball, the Consul General at Bagdad, one of which got loose and leaped overboard just at dawn. The steamer was then about half way to Bagdad, and getting under way, after anchoring as usual for the night. The horse was not missed for half an hour, but was then descried ashore, in what seemed very unpleasant proximity to a splendid lion. The lion circled round and round him, always closing in. The horse remained motionless, beyond turning his head sufficiently to watch the lion's movements. Suddenly the latter gave a tremendous bound, but the horse was too quick for him, and escaped with a slight scratch; but instead of galloping away, he only went a hundred yards, and again stood still. The lion commenced his former tactics with a similar result, only his bound was less vigorous this time. The horse did not even yet take completely to his heels; he seemed either tied by some strange fascination, or inclined to tantalize an enemy from whom a few minutes' canter would have entirely freed him. Again the lion commenced his circles, but ere they were narrowed to springing distance a party had landed from the steamer, and the instant the horse had descried them he came galloping down, while the lion stalked away toward the jungle."

Agricultural Exhibitions for 1862.

STATE FAIRS.

Name.	Where held.	Date.
Great National Horse Fair	Williamsport, Pa.	Sept. 2– 5
World's Horse Fair	Chicago, Ill.	" 2–16
Wisconsin Agr. & Mech.	Milwaukee	" 9–12
Vermont	Rutland	" 9–12
Ohio	Cleveland	" 16–19
Kentucky	Louisville	" 16–20
Canada East	Sherbrooke	" 17–19
American Pomological Soc.	Boston, Mass.	" 17–
Michigan	Detroit	" 23–26
Illinois	Peoria	Sept. 29—Oct. 4
New-York	Rochester	" 30— " 3
Iowa	Dubuque	" 30— " 3
Pennsylvania	Norristown	" 30— " 3
Indiana	Indianapolis	" 30— " 3
New-Jersey	Newton	" 30— " 3
Connecticut	Hartford	Oct. 7–10

COUNTY FAIRS.

MAINE.

North Waldo	Unity Village	Oct. 15–16

NEW-HAMPSHIRE.

Merrimack River	Nashua	Sept. 17–18

CONNECTICUT.

Fairfield	Norwalk	Sept. 23–26
Middlesex	Middletown	" Oct. 1– 3

VERMONT.

Franklin	Fairfield	" 24–25

NEW-YORK.

Broome	Binghampton	Sept. 9–12
Chautauqua	Panama	" 10–12
Tonawanda Valley	Attica	" 12–13
Delaware	Franklin	" 17–19
Queens	Newtown	" 18–19
Susquehannah Valley	Unadilla (Otsego Co)	" 23–24
Cattaraugus	Olean	" 23–25
Ulster	Kingston	" 23–25
Chautauqua (Union)	Fredonia	" 24–26
Tompkins	Ithaca	" 24–26
Livingston	Geneseo	" 25–26
Washington	Salem	" 30—Oct. 1

NEW-JERSEY.

Monmouth	Freehold	Sept. 17–18
Burlington	Mount Holly	" 30—Oct. 1

PENNSYLVANIA.

Washington	Washington	Sept. 24–26
Lawrence	New Castle	" 1– 3
Snyder	Middleburg	" 2– 3
Chester	Westchester	" 3– 4
Bucks	Newtown	" 24–25
Susquehanna	Montrose	" 24–25

WISCONSIN.

Racine	Union Grove	Sept. 16–18
Green Lake	Berlin	" 17–18
Sheboygan	Sheboygan Falls	" 17–18
Columbia	Portage	" 24–26

KENTUCKY.

Boyd	Ashland	Sept. 16–18

OHIO.

Cuyahoga	Cleveland	Sept. 2– 5
Fayette	Washington C. H.	" 2– 5
Coshocton	Coshocton	" 8–10
Franklin	Columbus	" 9–12
Medina	Medina	" 9–12
Clinton	Wilmington	" 10–12
Defiance	Defiance	" 10–12
Pickaway	Circleville	" 10–12
Carroll	Carrollton	" 14–16
Columbiana	New-Lisbon	" 23–25
Clermont	Bantam	" 23–26
Huron	Milan	" 24–26
Knox	Mount Vernon	" 24–26
Ashtabula	Jefferson	" 24–26
Miami	Troy	" 24–26
Portage	Ravenna	Sept. 30—Oct. 2
Lake	Painesville	" 30— " 2
Shelby	Sidney	" 30— " 3
Lorain	Elyria	" 30— " 3
Champaign	Urbana	" Oct. 1– 3
Hardin	Kenton	" 1– 3
Harrison	Cadiz	" 1– 3
Seneca	Tiffin	" 1– 3
Summit	Akron	" 1– 3
Wayne	Wooster	" 1– 3
Morrow	Mount Gilead	" 1– 3
Tuscarawas Valley	Masillon	" 1– 4
Morgan	McConnellsville	" 7– 9
Tuscarawas	N. Philadelphia	" 7– 9
Richland	Mansfield	" 7– 9
Williams	Bryan	" 7– 9
Delaware	Delaware	" 8–10
Greene	Xenia	" 8–10
Stark	Canton	" 8–10
Union	Marysville	" 8–10

INDIANA.

Morgan	Centerton	Sept. 2– 5
Sullivan	Carlisle	" 3– 5
Wabash	Wabash	" Oct. 9
Fulton	Rochester	" 10–11

ILLINOIS.

Henry	Cambridge	Sept. 3– 5
Winnebago	Rockford	" 16–19
Hillsborough		" 16–
Boone	Belvidere	" 23–25
Tazewell	Tremont	" 23–26
Randolph	Sparta	" 24–26
Jasper	Newton	" Oct. 1– 3
Warren	Monmouth	" 8–10
St. Clair	Belleville	" 7–10
Madison	Edwardsville	" 7–10
Greene	Carrollton	" 7–10

IOWA.

Harrison	Magnolia	Sept. 17–18

MICHIGAN.

Van Buren	Paw Paw	Sept. 23–24
Kalamazoo	Kalamazoo	" 24–26

KANSAS.

Lawrence	New Castle	Oct. 1– 3

CALIFORNIA.

San Joaquin	Stockton	Sept. 9–12

The Crop Reports and the Market—Weather, etc.

Our crop reports represent a very flourishing condition of the country, agriculturally speaking. The grain crop is decidedly in advance of last year's, though that was very great. Corn alone of the cereals falls behind. There are now very encouraging market prospects, indicating a certain demand for American breadstuffs. Naturally, this would tend to fix the price of wheat, at least in men's minds, but the state of the money market is such that it is impossible to name any figures which can be regarded as the probable price. The difference between gold and paper money is now so enormous, and there being no way to tell how long this state of things will last, that other values are very uncertain, and will continue to be until the relations of trade are less disturbed and a more settled state of the money market prevails.

THE WEATHER has been prevailingly favorable over the whole country, except North-eastern New-York and Northern New-England, where, up to our last advices, a severe drouth prevailed. Late in June (17th to 20th,) frosts of considerable severity visited Central New-York, some parts of Pennsylvania, and the West, doing much damage, but only in quite limited sections. The insect pests are making their accustomed havoc here and there. The cherries, grains, etc., suffered from the aphis—various caterpillars have been abundant, the chinch bug has done great damage in spots, and so has the midge, and in Colorado the grasshopper (or locust) has swept some districts, but no wide-spread desolation has occurred by drouth or wet, moth or rust.

GENERAL AVERAGE.—An average of each column is given at the foot of the table. Taking *prospects* alone exclusive of the fruits, we find an improvement over June; **10.8** being the average for July, against **10.3** in our last report. This is due to the wheat crop being successfully gathered. The general average of all crops, except fruits, including breadth, prospects, etc., is **11.8** and including fruits it is **12.8,** better than even the May report. The general average for the three months thus far reported; runs, May **12.6**, June **12.2**, July **12.8**.

Reports on Crops, July 10, 1862.

(See General Remarks and Reports on Special Crops on page 232.)

NOTE TO REPORTERS.—It is very important that a large number of the reports be mailed earlier than heretofore. It is useless to put two rows of figures, for we are obliged to average them afterward. It is also perplexing to have the words *fair, good, pretty good, poor,* etc., used instead of figures. After a crop is harvested, please estimate it, and mark figures as usual.

EXPLANATIONS TO THE READER. (Full details are given on the Blank Forms furnished to Reporters.)

The First Column gives the Counties from which the reports come. In many cases the territory reported upon extends over adjacent counties, and the figures apply to a larger territory than the county named, but sometimes to single townships only.

The Second Column gives the number of persons in each county or locality, the average of whose opinions are embraced in the single rows of figures, standing opposite in the same line. In several cases a whole County is represented by an officer of the Agricultural Society, who gives the summary of reports from assistants in each of the towns *m* indicates that a large but indefinite number of persons joined in making the report.

The Third Column gives the names of the persons who received and distributed blanks, and collected and forwarded returns.

☞ *In all the reports the numeral* **10** *is taken as the standard for comparison,* thus:

Column A—10 means that the weather for a month previous to the date of the report was about as good as the average for other years, that is for growing crops and for general farm operations. Figures above or below **10** indicate the comparative propitiousness or unfavorableness of the weather.

Columns—B—E—H—In these **10** indicates that the amount of surface growing is about the same as *last year.* Each figure (or unit) above **10** means a tenth more of surface, and each unit below **10**, means one-tenth less. Thus, 5 means one-half of average surface—**15** means one and a half—**20** means double, and so on.

Columns C—F—I—L—N—P—S—In these columns **10** means that the average surface sown or planted or growing is about the same as the average for five years past. Each unit above or below **10** stands for an increase or decrease of one-tenth in the surface.

Columns D—G—K—M—O—R—T—U—V—In these columns **10** means that the *conditions* and *prospect* on June 10th indicated an *average yield per acre.* Here also each unit above or below ten indicates the prospect of a yield a tenth above or a tenth below the average; thus, a half crop is indicated by **5**—a double crop by **20.** Some report fruit prospects at **100** to **300**, meaning that the promise is for ten to thirty times the average.

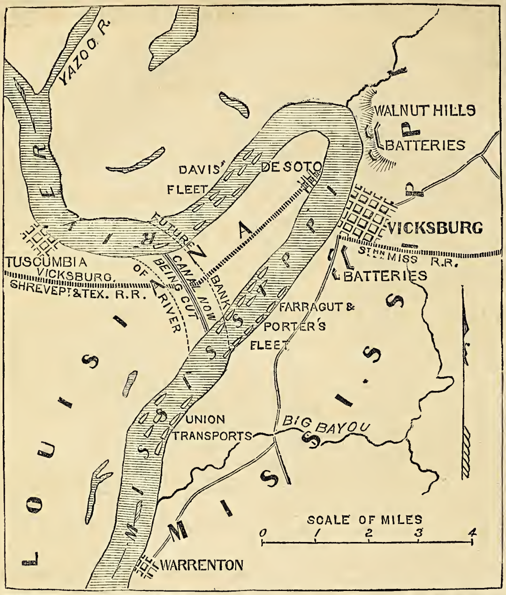
Blanks left in a column indicate that little or none of the crop is grown, or that it is so early to report upon it, or that the reporter could not estimate satisfactorily to himself. No reports have been received from some whose names are in the list, and who furnished reports last month.—For comments and reports on other crops see page 260.

Registered No.	County and number of persons reporting from each.	Persons gathering and sending the reports.	Weather.	Winter Wheat Surface vs. last.	Winter Wheat Surface vs. av'ge.	Winter Wheat Prospects at date.	Spring Wheat Surface vs. last.	Spring Wheat Surface vs. av'ge.	Spring Wheat Prospects at date.	Corn. Surface vs. last.	Corn. Surface vs. av'ge.	Corn. Prospects at date.	Rye. Surface vs. last.	Rye. Surface vs. av'ge.	Rye. Prospects at date.	Oat. Surface vs. last.	Oat. Surface vs. av'ge.	Oat. Prospects at date.	Potatoes. Surface vs. last.	Potatoes. Surface vs. av'ge.	Potatoes. Prospects at date.	Apples.	Peaches.
	OHIO.		A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	R	S	T	U	V	
1	Washington	A. J. Hart	10	12	10	25				10	12	10	12	15	10	9	10	15	10	15	15	15	
2	Angelaize	Samuel Craig	10	10	12	15				10	9	10	10	11	10	10	11	10	11	100	100	100	
3	Miami	Enoch Jones	10	11	12	15				10	11	9	10	10	10	10	10	9	10	12	25	25	
4	Trumbull	L. P. Andrews	9	10	10	30	45	8	12	10	10	10	9	15	20	10	10	11	10	30	15		
5	Huron	S. Simmons	10	12	13	13	12	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
6	Crawford	D. Robertson, jr.	9	10		12	20	15	10	10	9	10		10	10	10	10	14	10	10	14	12	
7	Ashtabula	E. W. Kennedy	10	15	20	18	20	13	12	15	15	10	12	20	20	10	9	10	20	20	20	20	
8	Licking	G. W. Penny	8	12	12	20				15	20	15				5	10	10	10	15	15	15	
9	Portage	Geo. Savage	10	11	11	20	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
10	Stark	Jacob Holl	9	12	10	12	20	30	10	10	10	8				9	10	11	12	11	9	8	
11	Paulding	J. S. Goodin	10	15	12	20				8	8	8				5	13	15	10	10	9	12	
12	Jackson	D. Mackley	10	12	10	20				10	12	10	12	12	10	12	12	15	12	15	20	15	
13	Richland	Joel Myers	10	12	12	15	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
14	Fairfield	Thomas Cole	12	13	12	15	20	10	10	8	8	8				8	13	10	12		15	16	
15	Wyandot	J. D. Beam	10	12	12	15	20	10	10	10	12	10	10	10	10	10	10	12	14	12	10	10	
16	Portage	Homer Mills	14	12	14	13	15	12	10	12	10	8	10	10	10	10	10	10	11	10	11	10	
17	Ashland	H. M. Close	15	12	11	20				12	10	11	10			9	10	9	10	15	15	15	
18	Wayne	A. G. Brown	10	12	12	15	20	10	10	10	10	10	10	10	10	8	10	9	10	12	12	12	
19	Coshocton	J. B. Burt	8	12	10	20				10	10	10	8	10	9	8	10	12	10	15	15	15	
20	Tuscarawas	A. O. Misch	10	12	12	15	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
21	Erie	G. A. Ransom	8	12	10	9	15	15	8	10	8	8	10	10	9	10	10	12	10	10	12	10	
22	Washington	E. F. Hayward	9	12	10	20				10	12	10	10	10	10	9	10	10	10	10	10	10	
23	Morgan	Wm. Mihons	10	12	12	15	20	30	9	10	10	8	10	10	8	10	10	12	10	10	10	10	
24	Jefferson	John Edwards	10	12	12	15	20	30	9	10	10	8	10	10	8	10	10	12	10	10	10	10	
25	Portage	A. S. Plummer	18	11	10	19	09	99	11	10	9	12	16	15	10	12	9	13	12	9	9	9	
26	Geauga	G. W. Hesket																					
27	Ashtabula	C. G. Calkins	10	10	10	9	12	15	5	10	10	7	10	10	7	9	10	7	8	10	9	15	
28	Belmont	Edd McCue																					
29	Belmont	Slater Brown	10	10	9	15	20		5	10	13	8	10	12	12	10	12	14	10	16	10	10	
30	Butler	Jas. Comings	13	12	12	20				12	10	10	10	10	10	10	10	10	10	10	10	10	
31	Green	J. Clay Cox	8	12	12	20				12	10	10	8	12	10	8	14	10	12	15	10	10	
32	Licking & Fr'k	Jas. Strang	8	12	11	15	25	5	11	10	11	12	10	8	12	10	12	11	12	15	60	60	
33	Richland	H. S. McFarland	10	12	12	15				13	14	15	10	14	9	15	10	15	10	12	15	90	
34	Fayette	D. M. Hays	10	10	10	20				10	10	10	10	10	10	10	10	10	10	10	8	10	
35	Butler	John M. Minkin	13	12	12	15				10	10	10	10	10	10	10	10	10	10	10	10	10	
36	Miami	J. K. Fretz	12	11	12	15				10	10	10				9	10	13	10	10	12	10	
37	Union	Dr. R. P. Mumm	10	12	10	20				10	11	9				5	10	13	10	13	100	100	
38	Union	M. H. Pennell	10	10	12	15				5	4	3				10	10	10	10	10	8	25	
39	Champaign	J. T. Zumbro	10	12	12	25	8	6	10	10	10	12	10	15	10	10	10	10	10	15	100	100	
40	Champaign	John Courtright	10	12	12	14				10	10	10	10	12	10	9	10	11	10	10	50	50	
41	Pickaway	D. W. C. Longshore	7	10	9	11	15	5	7	13	10	10	10	12	11	9	8	9	10	10	5	5	
68	Columbiana																						

Key	County.	Key	Chief Reporters.	Winter Wheat	Spring Wheat	Corn.	Rye.	Oat.	Hay	Pot. atos	Fruit. Ap'ls
	INDIANA.			A	B	C	D	E	F	G	H
53	Benton,		D. Campbell,								
54	Jay	8	Peter Walter,	8	11	23	15		11	26	5
55	Hendricks,		9 A. Whiteneck,	20	11	16	14		10	11	13
56	Knox,		9 Joel Wampler,	12	13	15	14		9	8	7
57	Randolph,		10 C. G. Puckett,		10	10	13	15		10	10
58	Henry,		29 J. B. Redding		12	13	15	15		11	12
59	Henry,		J ohn Allen		12	12	14	12		12	13
60	Sullivan,		3 Murray Briggs,		11	13	13	13		10	12
61	Hendricks,		30 Jacob Rader		12	10	12	11		11	15
62	Marshall		1 Ped. Hoover,		10	12	10	12		15	16
63	Ripley		2 H. Saltmarsh,		12	11	13	12		10	12
64	Henry,		P. P. Pefler,								
65	Vermillion,		8S. Grandyce,		15	15	15	20		11	13
66	Hendricks,		1 A. Farnas,		10	10	11	15		10	12
67	Ripley		John Bennett,								
68	Newton		3 Elam G. Smith,		7	15	50	13	10	15	10
69	Jefferson		6 Wm. Thomas, Jr.,		10	13	60		13	20	
70	Switzerland		3 W. H. Stow,		12	13	14	10		8	9
71	Greene		6 Wm. Hovis,		10	12	10	12		10	12
72	Adams		P. N. Collins,								
73	Jackson		5 John McKeen,				11	15	20	15	
74	Jasper		1 John Bennett,		11	13	13	12		9	10
75	Ripley		3 S. S. Kershner,		10	13	11	10		10	12
76	Rush,		S. M. Ball,		11	9	10	12			
77	La Porte,		John southard,								
78	Wayne		46 John J. Fleming,		10	14	13			10	15
79	Johnson,		1 Hurricane P's A'S		12	12	9	15			
80	Perry		21 W. J. Fisser,		11	11	12	13		11	14
81	Decatur,		1 John W. Smith,		10	12	10	15			
82	Vermillion,		Wm. Davis,								
83	Morgan		C. S. Hilbourn,								
84	Parke,		3 James M. Lyons,		12	13	15	15		10	12
85	Randolph,		18 L. M. Reeves,			13	13	15			
86	Hamilton,		20 Andrew F. Evans		12	13	13	10		10	12
87	Marion,		8 L. W. Ritter,		10	14	10	13			
88	Wells, S.		Wooton,			10	10	13			
	ILLINOIS.										
89	McDonough,		1 Neal Abbott,	12	12	14	10	10	13	15	10
90	Colon,		C. Bolt,								
91	Saline		10 James M. Eaton,		12		11	12	13		10
92	Jersey		J. M. Bacon,		10	14	10				
93	Jasper		1 Henry Griffing,		12	15	15	15		10	13
94	Pike,		Thos. Gollyear,		7	8	5	8	10	10	10
95	Vermilion		H. C. Smith,								
96	Richland,		H. A. Hunt,		10	13	25	15		10	
97	St. Clair,		5 Edw. Flanagan,		10	13	15		8	6	5
98	Marion,		A. L. Ivory,								
99	Du Page,		3 C. W. Branch		10	10	12	13	13	6	7
100	Macoupin		1 Levi Grundy,		13	13	20		20	14	14
101	Cumberland		2 J. E. Mumford,		10	13	18		9	10	8
102	Putnam & Marl		C. Rowland,								
103	Wayne		10 James Freeman,		9	10	9	5	8	6	9
104	Ogle		John Sharp,		20	25	30	20	15	7	10
105	Vermillion		1 Hiram Bowman &		12	13	10		8	10	9
106	Kankakee		Democrat Office,								
107	Kendall		H. S. Hills,								
108	Crawford,		Erastus Logan		15	15	20	25		10	15
109	Douglass,		Jacob Bates,								
110	Mason		J. B. Wright,								
111	Douglass,		1 J. Hasked,		10	10	8	10		10	12
112	Warren,		1 A. H. Tracy,		12	11	10	15	11	13	9
113	Adams,		S. L. Vaughn,								
114	Marshall		W. H. Webbers,		10			5	7	5	10
115	Washington		A. Beal,		15	15	50	15		15	
116	DeKalb		1 N. F. Graves,		7	11	10	8	11	16	8
	WISCONSIN.										
117	Rock,	9	Abijah Sweet,	10	10	80	20	20	60	10	10
118	Dodge		D. L. Bancroft,								
119	Fond du Lac,	14	Ed. Reynolds,	10			11	14	12	10	10
120	Walworth		1 Geo. Cross,	15			10		9	10	15
121	Green Lake,		1 S. S. Whitter,	10			10		10	10	10
122	Jackson		1 C. T. Gansel,	8	8	10	12	14	20	8	12
123	Dane		1 A. A. Kiersted,	8	10	10	12	14	10	12	15
124	Trempleau		6 F. W. Newland,	3	10	13	15	15	8	10	16
125	Grant,		9 J. A. Curtis,	11	10	3	15	9	10	7	11
126	Adams		W. Pierce,								
127	Sadax,		J. A. Somerby,								
128	Fond du Lac,	5	Jerry A. Horton	10					10	11	11
129	Monroe,	11	G. M. Robinson,	4	11	15	8	11	20	5	15
130	Day,		Wm. Hawkes,								
131	Brown,										
132	La Fayette		J. C. March,								
133	Grant,	9	Thos. Pendleton,	7			17	10	5	40	17
134	Grant,	5	Jas. D. Waddell,	7	10	4	10	18	12	8	10
135	Oconto,		H. D. Rockwell,	12	8	32	10	12	15	10	11
136	Rock,		H. D. Root,	10	50	8	8	12	7	10	10
	IOWA.										
137	Jackson	3	H. Stephens,		13	9	6	4	13	20	14
138	Clinton	9a	C. W. Hatch,	10			10		10	10	10
139	Cedar	1	J. A. Macy	9			10	23	7	11	30
140	Fayette	1	H. A. Wood	10			10	15			
141	Dingzold		I. S. Beall,								
142	Delaware	9a	J. L. McCreery	9	13	16	14	15	7	11	13
143	Fowshick,	1	Erastus Snow	10	12	20	15	9	8	15	30
144	Marion,		B. C. Belding	12	10	12	20	20	15	12	15
145	Keokuk	1	J. C. Alexander,	10			10	8	10	10	15
146	Madison	1	J. Carman	12	8	10	15	8	10	10	15
147	Scott,	1	T. F. C. Schmidt,								
148	Buchanan	1	H. C. Hemlway,								
149	Tama	1	G. A. Marshall,	10			10	15	10	10	10
150	Lucas,	1	C. Moorlead,	13			17	18	9	12	14
151	Page,	6	S. H. Reidenbaugh,	9	11	50	10	10	10	9	11
152	Lina	1	F. W. Williams,								
153	Clayton	1	Wm. A. Penfield,	8			12	50	17	25	10
154	Madison,		Josiah Carmean,								
155	Scott	2	G. W. Crum,				11	15	8	11	14
156	Wayne	23	J. S. Whittaker,	10	11	12	7	9	8	9	10
157	Delaware,	2	C. Skinner,	9	12	15	15	10	12	10	12
158	Jones		Isaac Willard				11	12	7	11	12
159	Linn,	1	H. G. Raymond,								
160	Dallas,	1	H. E. Belden,	10					15	15	13
161	Howard,	1	H. W. Partch,	15			12	40	15	30	15
	MINN.										
162	Hennepin,	9a	Jonas H. Howe,	12	11	20	15	11	18	15	10
163	Fillmore	1	A. Gould,	9	10		15	40	10	12	12
164	Dodge,		S. T. G. Patch,				15	40	10	12	12
165	Olmsted	3	H. H. Talbot,	10			10	25	10	10	10
166	Winona	20	R. S. Crittenden,	15	13	20	20	11	15	12	9
167	Wabasha	1	J. H. Green,	10			10	15	10	10	10
168	Nicollet		Wm. H. Sigler,								
169	Fillmore	5	A. Hitchcock,	10			12	20	9	14	15
170	Dodge	4	A. Smith,	10			11	15	10	12	14
171	Wabasha	1	Wm. McLeroud								
172	Blue Earth	1	James Miller,								
	MO.										
173	Marion,	1	W. I. Meeder,	10	9	10	10	11	15	7	10
174	Mississippi	1	Geo. Whitcomb,	15							
175	Franklin,	4	Charles E. Ross,	13			10	15	10	10	10
	KY.										
176	Spencer	7	Milton McGrew,	12	10	11	10		8	10	9
	MICH.										
177	St. Joseph,		O. W. Beall,								
178	Berrien	1	A. Bennett,	10	10	12	9		12	10	13
179	Jackson	1	D. D. Watkins,	10	10	12	10	12	10	10	10
180	Sanilac,	16	C. Waterbury,	5	10	30	9	5	8	10	12
181	Calhoun	1	C. M. Kerr,	10	10	12	8		10	11	9
182	Clinton	1	John Watling,	8	10	15	40	5	10	50	6
183	Lenawee	1	Rufus Reider	10	11	12	10	12	10	10	10
184	Ionia,	4	D. T. Lawrence,	10	13	15	9	10	10	11	12
185	Ionia,	6	Charles Goodrich	12	13	16	8		10	12	11

Key	County.	Key	Chief Reporters.	Winter Wheat	Spring Wheat	Corn.	Rye.	Oat.	Hay	Pot. atos	Fruit. Ap'ls
	N. Y.			A	B	C	D	E	F	G	H
49	Chautauqua,		1 John J. Phelps,	10	10	15	12	10	10	10	11
50	Orleans		9 Peter Ferris,	9	12	13	8	9	11	11	8
51	Lewis		5 John P. Bates	6			9	10	9		
52	Wyoming		1 Hon. Dr. Wolfe,	15	8	15	12	10	10	10	8
53	St. Lawrence,		H. J. S. Wallace,		11		11	10	12	12	14
54	Delaware		1 Levi Miles	10	7	10	8	8	10	10	12
55	Niagara		1 J. Q. Adams,								
56	Cayuga		1 E. E. Woodruff,	10	12	16	15	8	10	10	11
57	Fulton,		Geo. W. Beaton,								
58	Niagara,		A. F. Raymond,								
59	Oswego,		D. Farling								
60	Chenango,		H. T. Richmond,								
61	Otsego		H. T. Richmond,								
62	Wayne		A. M. Richardson	8	10	13	10	12	10	8	10
63	Cayuga		R. W. Thompson,								
64	Chautauqua		1 E. A. Whittemore	10	10	10	15	13	15	15	10
65	Cayuga		9 E. A. McKay,	12	13	30	14		7	10	12
66	Saratoga		1 C. J. Kouse,	12	11	18	8	12	10	8	10
67	Onondaga		1 T. G. Newell	13	14	15	7	8	8	10	8
68	Queens,		99 Farmer's Club,	10	10	11	9		10	10	10
69	Lesser		Jos. E. Smith,								
70	Suffolk		3 Watson Wilson,	12	15	30	10	10	15	12	10
71	Wyoming		1 D. T. Griffin,	8	7	13	8	30	7		6
72	Westchester		James Wood								
73	Allegany		2 J. H. Weaver,	11		9	8	12	7	9	10
74	Broome		Cephas Benedict,								
75	Suffolk		John Henderson,								
76	Allegany		Daniel H. Cobb,								
77	Broome		44 Dr. Treadwell,	10	10	10	7	11	12	8	13
78	Broome		R. Hoyt & Co.								
79	Niagara,		1 E. S. Holmes,	11	13	20	10	20	8	6	8
80	Tioga		1 H. Brooks,	10	11	15	10	10	8	12	13
81	Suffolk		2 Alonzo Mott,	10	10	9	10	10	10	10	10
	PENN.										
82	Franklin,		John F. Clayton	10	12	11	11		11	10	13
83	Franklin,		1 Jas. H. Clayton	15	12	15	10	8	10	11	10
84	Bradford		1 R. B. Burk,	10	10	10	8	8	10	10	10
85	Snyder		1 F. Werick,	10		14			10		8
86	Franklin,		1 O. S. Brown,	10	10	15	10	10	10	10	10
87	Fayette		1 P. Orlevee	10	10	20	20	15	15	10	10
88	Dauphin		1 D. Urlpfinger,	10	12	15	12	10	10	10	10
89	Franklin		1 J. Sharpe Nixon	10	11	12	20		9	10	15
90	Perry		2 Alex. Kaufman,	8	15	30	15		10	11	15
91	Montgomery,		8 S. E. Pearse,	10	11	14	15	15	10	10	10
92	Lancaster		1 Cyrus Brinton,		10	12	7		10	11	11
93	Lancaster		1 J. M. Sommerman,		10	11	8		12	10	10
94	Cumbria,		1 John Lloyd,	10	10	12	13	10	10	10	15
95	Lawton,		1 Edward Cook,	10	10	12	10	10	10	10	10
96	Delaware,		3 Chas. G. Ogden,	12	13	12	11		10	10	10
97	Franklin		1 D. H. Anderson,	10	10	12	10	10	10	10	10
98	Blair,		S. B. Eplogle,								
99	Centre		1 G. C. Kelso,	10	10	10	12		10	10	10
100	Butler,		1 Finley Balph,			12		7		10	
101	Montgomery		1 J. Zimmerman,	10	10	14			10	10	10
102	Susquehanna,		1 G. B. Slack	10	30	10	10	10	10	10	10
103	Fayette		1 Jas. Robinson	10	10	20	10	7	10	10	10
104	Washington,		1 John Post,	10	10	20		13	10	13	10
105	Lancaster,		1 A. B. Musselman	10	10	12	10	10	10	10	10
106	Juniata,		99 J. W. Patterson,		10	11		9	10	8	11
107	York		1 P. J. Harman,	10	10	13	7		11	10	10
108	Washington,		1 Jos. M. Cleery,								
109	Chester		1 A. V. Trimble,		10	12	10	10	10	10	10
110	Cumberland,		1 J. Rupley,	10	10	12	10	10	10	10	10
111	Lancaster,		1 A. P. McIlvain,		11	10	8		10	10	9
112	Indiana,		10 J. M. Meaughey	15	10	11	10	12	10	10	10
113	Luzerne		Pr Sutton,		11	11	10	12	10	10	10
114	Lancaster,		1 B. F. Hoover,								
115	Armstrong	21	J. McClymond,	13	10	11	15	11	10	10	9
116	Lancaster,		1 C. Bullet,	10	10	12	10	10	10	10	10
117	Susquehanna,		8 Jos. Bowman,	12	10	8	10	10	11	12	10
118	Northampton		9 R. L. Walker,	10	10	12	10	10	10	10	10
119	Allegheny										
	N. J.										
120	Cape May		J. G. Leach,								
121	Mercer		1 C. F. Nicholson,	10	10	10	15		10	10	9
122	Somerset		1 A. Fleming,	10	10	10	15		10	10	9
123	Hunterdon		1 D. J. Blackwell,	10	10	10	15		10	10	9
124	Somerset		1 Ira J. Blackwell,	9	10	10	15		10	10	8
125	Middlesex		1 C. G. Spulz,								
126	Mercer		6 C. M. Norton,	10	10	12	15		10	10	9
127	Hunterdon		1 Jos. Hoagland,	10	10	20	20	8	10	10	10
128	Hunterdon		3 A. L. Mellick,	15	15	20	20		10	15	20
129	Camden		4 J. S. Colcs,	9	10	12	9	14	10	10	10
	DEL.										
130	Kent		1 T. B. Coursey,	8	10	10	10		10	12	9
131	Kent		M. Hayes,								
132	Kent		Robt. M. Reynolds								
133	Newcastle,		6 C. Churchman, jr.	8	14	10	9		10	10	8
	VA.										
134	Wood		1 E. McIdahl,	10	12	13	12		10	10	10
135	Wood		1 E. Wharton,								
	MAINE.										
136	Waldo		Geo. E. Beckett,	10			9	8	10	10	9
137	Kennebec		H. M. Mansfield,		13	14	9	11	5	9	12
138	Penobscot		1 W. W. Johnson,	10			10	15	10	10	10
139	Somerset		1 A. Davis,	10	10	15	5	20	25	15	10
	N. H.										
140	Cheshire		3 Geo. H. Gilbert,	10	10	10	10	10	10	10	10
141	Merrimac		13 J. W. Simonds,	9	13	13	15	13	12	10	9
142	Carroll,		Joseph Spinney,								
	VT.										
143	Bennington,		1 Allen Benson,	8			9	9	11	12	13
144	Bennington,		J. H. Cleveland,								
145	Orange,		60 Rufus Brown,	15			11	10	9	10	10
146	Bennington,		1 D. Lawrence,	10	6	11	9	12	10	10	10
147	Chittenden		1 W. H. Kingsbury	10	6	11	9	12	8	13	11
148	Franklin,		1 E. E. Towle	10		10	11	14	10	9	12
149	Windham		1 Prentice	10		10	12	12	9	7	10
150	Lamoille,		1 S. Howard, jr.,	10		10	10	9	10	10	7
	MASS.										
151	Berkshire	17	S. S. Jenne	11			12	13	13	10	11
152	Hampden		Charles A. Wood,								
	CONN.										
153	New London		W. H. Starr,								
154	New Haven		Chas. F. Phelps,								
155	Litchfield	21	G. Reynolds,								
156	Litchfield		H. G. Reynolds,								
157	Litchfield	11	Wm. Wanzer								
158	New London		C. Harslow,								
159	Hartford		O. D. Case,								
160	New London		1 T. A. Chapman,								
	KANSAS.										
161	Brown	1	David Peebles,	12	12	50	12	10	10	50	6
162	Brown	1	Wm. F. Johnston,	10	10	9	10	10	10	10	8
163	Wyandotte,		R. B. Taylor,								
164	Wyandotte,	1	W. W. Blackburn	10	12	10	12	15	10	9	10
165	Dickinson,		Green Lamb,	5	20	25	10	20	50	15	10
166	Douglass	1	Alex. Rankin,	10			10	15	10	15	15
	COLORADO.										
176	Wm. N. Byers,			10	00	..	15	00	..	15	30
	NEBRASKA										
802	Pawnee	1	Geo. T. Bobst,	6	15	15	15	00	20	8	10

	A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	R	S	T	U	V
Number of Persons	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Average for the whole County.	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587
	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587	1,587



OPERATIONS AT VICKSBURG.—The map shows the City of Vicksburg, Miss., on the eastern side of a large bend in the Mississippi, and the track of the canal now nearly completed, through which at the first rise, it is expected the waters will form a new and permanent channel, thus opening the navigation of the river.

Market Review, Prices, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Friday Morning, July 18, 1862.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats
23 days *this* m'th	654,000	3,239,000	2,355,000	73,000	43,000	447,000
23 days *last* m'th	594,000	4,280,000	1,920,000	43,900	110,000	473,000

SALES.	Flour.	Wheat.	Corn.	Rye.	Barley
23 days *this* mouth,	642,000	4,726,000	3,052,000	132,000	6,000
28 days *last* month	697,700	5,337,000	2,612,000	185,500	31,000

2. *Comparison with same time last year.*

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
23 days 1862......	654,000	3,239,000	2,355,000	73,000	43,000	447,000
26 days 1861......	472.000	3,105,000	1,132,000	188,000	54,100	477,000

SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.
23 days 1862......	642,000	4,726,000	3,052,000	132,000	6,000
26 days 1861......	399,000	4,475,000	1,861,000	153,500	——

3. *Exports from New-York, from Jan.* 1 *to July* 16.

	Flour	Wheat.	Corn.	Rye.	Barley.	Oats.
1862....	1,552,583	8,045,042	6,612,533	894,988	22,088	22,023
1861...	1,330,444	10,711,805	4,974,185	190,034	1,000	142,464
1860....	606,975	2,121,725	1,763,725	100	8,280	98,764

4. RECEIPTS AT CHICAGO, JAN. 1, TO JULY 7.

	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
1862....	757,457	5,096,822	11,383,476	465,498	431,225	1,059,901
1861....	613,165	5,232,484	9,433,364	227,427	306 387	511,982
1860....	229,022	1,848,202	9,233,009	61,782	190,356	612,978

5. *Stock in store at Chicago, July* 8.

	Flour.	Wheat.	Corn.	Oats.
1862............	36,650	1,106,964	3,050,066	——
1861............	23,700	174,808	1,630,214	——

Heavy receipts and sales of Breadstuffs have been reported, during the past four weeks. The weather and market news from England have been encouraging to export buyers, who have purchased freely, in anticipation of an extensive deficiency in the yield of the harvest in the British Islands. The rapid advances in the value of Gold, and in the rate of Sterling Exchange, has also stimulated the demand from shippers, as it gave them unusual advantage in executing their orders. Toward the close of last week export movements were checked by the rise on freights, and a strike among the grain shovelers, who refused to work in connection with grain elevators. This difficulty is now partially adjusted, and many of the laborers have concluded to resume work. The home trade inquiry has been good, The annexed table of prices indicates a very general and gratifying improvement in the market value of the principal kinds of Breadstuffs. Flour has advanced 25@50 cents per bbl.; wheat, 10@15 cents; rye, 3 cents, and oats have risen 3@4 cents per bushel; corn has fluctuated considerably, but closes with an upward tendency....The rise in Cotton has heen very rapid, amounting to 16 cents per lh., and sellers still have the advantage, the demand being largely in excess of the available supply. The receipts have averaged about 2,000 bales a week, while the weekly sales and re-sales have run up to an average of 6,500 bales....The supply of Provisions has been ample, and the market generally depressed, until within a few days, during which period hog products have been more sought after at advancing prices ...Hay has been quite plenty and in very moderate request at slightly reduced rates....Hops and Tobacco have been in fair demand and have been quoted very firm....Rice has been scarce and wanted; it closes higher....Wool was inactive early in the month; but, during the past ten days, has been quite freely dealt in and has increased in value. The market closes briskly. In the country there is less excitement, but high prices continue to be sustained. In fact, higher prices have been paid in the country than could he realized if forwarded here for sale. The bulk of the clip has been bought up.....The transactions in other agricultural products have been on a moderate scale. The table of prices show the changes and the present rates.

CURRENT WHOLESALE PRICES.

	June 20.	July 18.
FLOUR—Super to Extra State	$4 10 @ 4 75	$4 60 @ 5 25
Superfine Western	4 10 @ 4 20	4 55 @ 4 85
Extra Western	4 40 @ 6 75	5 25 @ 7 00
Fancy to Extra Genesee	4 80 @ 6 75	5 25 @ 7 00
Super. to Extra Southern	4 95 @ 6 75	5 20 @ 7 00
RYE FLOUR—Fine and Super.	2 70 @ 4 00	2 75 @ 4 10
CORN MEAL	2 90 @ 3 20	2 85 @ 3 25
WHEAT—Canada White	1 15 @ 1 25	1 30 @ 1 40
Western White	1 15 @ 1 35	1 30 @ 1 45
All kinds of Red	93 @ 1 20	1 02 @ 1 28
CORN—Yellow	55 @ 57	55 @ 58
White	58 @ 70	60 @ 70
Mixed	48 @ 54	48 @ 54
OATS—Western	43 @ 44½	45½@ 47
State	44½@ 45	47 @ 48
RYE	62 @ 75	74 @ 78
BARLEY	65 @ 75	None selling.
HAY, in bales, per 100 lbs	60 @ 75	50 @ 65
COTTON—Middlings, per lb	31 @ 31½	46 @ 47
RICE, per 100 lbs	6 50 @ 7 50	7 25 @ 7 50
HOPS, crop of 1861, per lb	14 @ 20	14 @ 20
FEATHERS, Live Geese, p. lb	38 @ 42	41 @ 43
SEED—Clover, per lb	7 @ 7¼	7½@
Timothy, per bushel	1 75 @	None selling.
SUGAR—Brown, per lb	6½@ 8½	7½@ 10½
MOLASSES, New-Orleans, p.gl.	40 @ 45	45 @ 50
COFFEE, Rio, per lb	19 @ 21½	20 @ 22½
TOBACCO—Kentucky, &c, p.lb.	7¼@ 18	8 @ 19
Seed Leaf, per lb	7 @ 25	7½@ 25
WOOL—Domestic fleece, p. lb.	40 @ 52	47 @ 56
Domestic, pulled, per lb	34 @ 44	36 @ 50
TALLOW, per lb	8¾@ 9	10 @ 10¼
OIL CAKE, per tun	28 00 @35 00	33 00 @38 00
PORK—Mess, per bbl	10 80 @11 00	11 00 @11 25
Prime, per bbl	8 62½@ 8 87½	8 75 @ 9 00
BEEF—Plain mess	11 25 @13 00	11 25 @13 00
LARD, in bbls., per lb	7½@ 8⅝	8 @ 9¼
BUTTER—Western, per lb	9 @ 16	9 @ 14
State, per lb	10 @ 18	10 @ 17
CHEESE	4 @ 7½	5 @ 8
Broom Corn—per lb	5 @ 7	5 @ 7
EGGS—Fresh, per dozen	9 @ 11	12 @ 12½
Western, per doz		10 @ 11
POULTRY—Fowls, per lb	7 @ 8	10 @ 11
Ducks, per pair	50 @ 60	38 @ 50
Geese, per pair	1 00 @ 1 25	1 00 @ 1 25
Turkeys, per lb	9 @ 10	11 @ 12
Dried Apples, per lb	5 @ 5¾	4½@ 5¾
Dried Raspberries, per lb	16 @ 17	14 @ 15
Dried Cherries, per lb		15 @ 16
POTATOES—New Junes, p. bbl.		2 00 @
Dykemans, New, per bbl		2 25 @ 2 50
Buckeyes, per bbl		5 25 @
Bermuda—New, per bbl	5 25 @ 5 75	5 25 @ 5 75
ONIONS—New Bermud, p. lb.	2 @ 2½	2 @ 2¼
TURNIPS—New White, p. bbl.	1 75 @ 3 00	1 00 @ 1 25
Rutabagas, per bbl		1 00 @
CHERRIES, per lb	7 @ 10	3 @ 8
GOOSEBERRIES, per bushel	1 00 @ 1 25	75 @ 1 50
GREEN PEAS, per barrel	2 25 @	1 25 @ 1 50
STRING BEANS, per bbl		1 50 @ 1 75
SUMMER SQUASHES, per bbl.		1 75 @
RASPBERRIES, p. ⅓ qt. basket		3½@ 4
CURRANTS, per lb		2 @ 3
HUCKLEBERRIES, per bushel		2 50 @ 2 75
BLACKBERRIES, per bushel		2 00 @
do. per qt. box		10 @ 12
APPLES, New Norfolk, p. bbl.		3 00 @

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been fully supplied during the past month and there has been a slight decline in prices. Most of the stock now hails from Illinois, and is of fair quality, corn-fed last Winter and grazed this Summer on the rich prairies. For the first week (June 24) we had 4,427 bullocks all of which were sold at about the rates of the previous week, or an average of 8c. per lb. for the estimated weight of the dressed carcass. The following week there were 5,187 cattle, which was 300 more than could be sold even at a decline of ⅛c. per lb. Graziers bought several droves for feeding along the Hudson River and Harlem railroads. The first week in July showed 4,250, which, taking into account those left from the previous week, and the fact that butchers then hought more than they wanted, proved some 250 more than were needed. Prices a shade lower still, with a slow market. At the last market, July 15, present 3,550 beeves, which an active demand soon used up at an advance of ⅛c., and a few hundred more could have been sold. Prices for prime steers were 8¼c.@8½c. ℔ lb.; fair cattle, 7½c.@8c.; poor stock, 7c., with a general average of 7¾c. for all kinds, the quality ranking only medium. Average weekly receipts, 4,354.

Veal Calves.—Receipts continue to fall off as the season advances, and the demand for veal is proportionally less. They are worth 3½c.@5½c. per lb., live weight, very few bringing the latter price. Good calves sell at 4½c.@5c. per lb. The average receipts for the past four weeks amounts to 587, or near 200 less than last month.

Sheep and Lambs.—Receipts have been much larger than last month, the weekly average being 9,885, but as mutton is a favorite food during hot weather, the demand has exceeded the supply, at least for two weeks past. Good sheep of 90 lbs. to 110 lbs. weight, alive, are worth 4c., and if really fat, 4¼c. Medium and thin stock sells at 3¾c. down to 3¼c. Lambs bring 5½c.@7c. per lb., approaching the price of sheep as they gain size and age.

Live Hogs.—Receipts are light just now, the number for the past week (5,871) being less than for any previous week since last September. The average receipts for the month are 8,690, against near 10,000 for the previous four weeks. Prices have ruled very low, reaching, July 8, the lowest point in ten years, with 9,560 on sale, following the large number of 12,900 the previous week. They fell to 3c. for prime corn-fed hogs. At the last market there was a marked advance in view of light arrivals, and fat corn hogs brought 3¾c., and still-fed hogs 3¼c. All sold.

The Weather has generally been warm, and during the last two weeks, rather dry. The crops are now looking well, and the hot weather has greatly changed the appearance of the corn, which was kept back by drouth, cold, and lastly too much rain. The berry crop is being diminished in some places for lack of rain, but on the whole there is every prospect of an abundant harvest of crops not gathered as will be seen by reference to our crop statistics on page 250. OUR DAILY NOTES, condensed, read:——*June* 21, 22, clear and fine—23, clear, with N. E. rain storm at night, which continued during the day and night of 24th—25, cloudy A. M., showers P. M., and at night—26, cloudy A. M., clear P. M.—27 to 29, clear, fine, hot, growing weather—30, light rain A. M., clear P. M.——*July* 1, clear, fine—2, N. E. rain storm P. M., and at night—3, cloudy A. M., clear P. M.—4 to 7, clear, hot days, the mercury reaching 90° in the shade—8, showers A. M., clear P. M.—9, 10, warm, light showers each day—11, 12, clear and fine, but cool—13 to 15, clear and hot, excellent corn weather, getting dry, with light shower at night of 15th—16, clear and hot, heavy thunder shower at night, soaking down thoroughly and doing abundance of good—17, 18, clear, and fine.

Rain Fall.—From the 15th of June, to the 15th of July, there were 4.38 inches of rain, which fell at 6 different times, besides 4 other slight showers which could not be measured.

Thermometer at 6 A. M., New-York.

Observations carefully made upon a standard Thermometer (Fahrenheit.)—+ indicates rain, ; snow.)

			FEBRUARY.								
1..	29s	7.....	38	13.....	31	19.....	30	r25.....	17		
2.....	30	8.....	37	14.....	33	20.....	38	26.....	30		
3.....	30s	9.....	26	15.....	23	21.....	25	r27.....	30s		
4.....	24	10.....	18	16.....	21	22.....	33	28.....	20		
5.....	24	11.....	30s	17.....	25A	23.....	33				
6.....	28r	12.....	33	18.....	30	24.....	38	Average 27°			
			MARCH.								
1.....	28°	8.....	33	15.....	35r	22.....	36r	28.....	29		
2.....	25	9.....	32	16.....	33r	23.....	36	30.....	32r		
3.....	29r	10.....	38r	17.....	31	24.....	36	31.....	38r		
4.....	36	11.....	37	18.....	30	25.....	35				
5.....	32s	12.....	36	19.....	28	26.....	30	Average 33°			
6.....	28	13.....	33r	20.....	35r	27.....	32				
7.....	35	14.....	34r	21.....	34r	28.....	37				
			APRIL.								
1.....	41	8.....	32s	15.....	43	22.....	48r	29.....	47r		
2.....	34	9.....	32s	16.....	49	23.....	46	30.....	49		
3.....	41r	10.....	34	17.....	52	24.....	38				
4.....	42	11.....	36	18.....	58r	25.....	39	Average 43°			
5.....	39r	12.....	38	19.....	58	26.....	41				
5.....	38	13.....	40	20.....	45r	27.....	47				
7.....	32	14.....	43	21.....	42r	28.....	44r				
			MAY.								
1.....	46r	8.....	44	15.....	49	22.....	58	29.....	52		
2.....	49r	9.....	49	16.....	55	23.....	62r	30.....	57r		
3.....	51r	10.....	59	17.....	58	24.....	54	31.....	56		
4.....	49	11.....	46	18.....	58	25.....	50		—		
5.....	50r	12.....	49	19.....	58r	26.....	51	Average 53°			
6.....	47	13.....	54r	20.....	52	27.....	55r				
7.....	48	14.....	56	21.....	56r	28.....	60r				
			JUNE.								
1.....	56r	8.....	56r	15.....	56r	22.....	58	29.....	71		
2.....	60r	9.....	56	16.....	49	23.....	60	30.....	66		
3.....	66	10.....	57r	17.....	54	24.....	64				
4.....	62r	11.....	56	18.....	61r	25.....	62r	Average 60°			
5.....	59	12.....	57r	19.....	61	26.....	58r				
6.....	59	13.....	57r	20.....	64	27.....	56r				
7.....	58r	14.....	67r	21.....	66	28.....	62r				
			JULY.								
1.....	66	5.....	63	8.....	71r	11.....	62	14.....	69°		
2.....	59r	6.....	72	9.....	74	12.....	60	15.....	71r		
3.....	55r	7.....	77r	10.....	69r	13.....	65	16.....	71r		
4.....	60										

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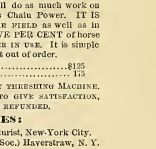

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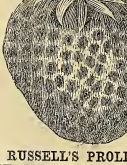

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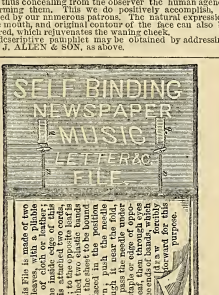

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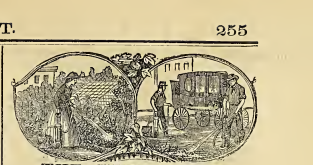

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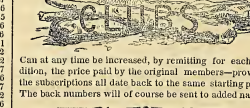

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☞See the Last Page, this month.

September.

"Wouldst thou thy vats with generous juice should froth?
Respect thy orchards; think not that the trees
Spontaneous will produce an wholesome draught.
Let art correct thy breed; from parent bough
A cion meetly sever; after, force
A way into the crab stock's close-wrought grain
By wedges, and within the living wound
Enclose the foster twig; nor, over-nice,
Refuse with thy own hands around to spread
The binding clay; ere long their differing veins
Unite, and kindly nourishment convey
To the new pupil; now he shoots his arms
With quickest growth; now shake the teeming trunk,
Down rain the impurpled balls, ambrosial fruit."
PHILLIPS.

With all that is said and sung of new fruits, and new varieties, there is danger, perhaps, that the attention will be diverted from that oldest and most widely distributed fruit, the apple. While men are priding themselves upon their splendid pears and grapes, apples very naturally fall into the back ground. Pears take the lead in the discussions at the Pomological Societies and make the biggest show at the horticultural and agricultural fairs. Tap a fruit grower on pears or strawberries and he will run freely; on apples he soon dries up. He will hold you by the hour on the wonderful performances of his new seedlings from the Bartlett or the Diel, but has no enthusiasm for the apple. It is given over, in far too many instances, to farmers and unskilful cultivators.

Yet the apple is the fruit for the million, and is a greater source of wealth to the nation than any other fruit we cultivate. It came over with the first settlers from England, and we very soon find traces of it in the early records of the colonies. It is not a very old fruit, even in the fatherland. Leonard Mascal has the fame of first introducing the cultivated apple into England, about the year 1525, less than a hundred years before the settlements of Jamestown and Plymouth. It was highly prized by the colonists, and it was the ambition of every settler who owned a plantation, to have his orchard, and his cider-press. The liquor seems to have been prized, both here and in England, more highly than the fruit. The orchard suggested hogsheads of cider fermenting in the cellar, rather thau barrels of choice winter fruit for family stores, or waiting a market. This view of the uses of the orchard impressed itself upon the whole population, and cider became a common drink at the tables of rich and poor, until the dawn of the Temperance reformation some thirty years ago. The fact that apples were grown principally for the press, made cultivators careless of the varieties. An apple indifferent for eating made a fair liquor, and seedling were quite as likely to be planted as grafted trees. Indeed many of the old orchards of the second and third generations are still largely made up of seedlings. Notwithstanding the low aims of the cultivators, the apple flourished in our new soil and climate, beyond all that the colonists had ever seen in the old country. Many of the trees raised from seed bore first-rate fruit, and we are indebted to chance seedlings for some of our best varieties. Indeed by far the larger part of the best apples upon our lists are of American origin. The Newtown Pippin is generally admitted to be the finest apple in the world. In eating qualities the Baldwin, the Spitzenberg, the Northern Spy, King, Swaar, and Cogswell are not much behind it.

The high price of apples, running from two to five dollars a barrel for good winter fruit, is a clear indication that we have not orchards enough. We believe a consultation of the price list would show a pretty steady advance for the last thirty years, notwithstanding the thriving business done by our nurseries and the immense number of orchards planted. For this there are a variety of causes. The extensive disuse of cider as a beverage has had some influeuce. Some thought it wrong to grow a fruit so liable to be perverted. A few cut down their orchards as a nuisance. Many thought it useless to plant orchards when there was no louger to be a demand for cider. Apples were so pleuty and cheap in many parts of the country that the only way to turn them into money was to make cider of them. Good winter fruit could be had in any quantity for fifty cents a barrel, and at that price it would not pay for a long transportation. It was like the plethora of corn upon the prairies away from railroads, where they use it for fuel. Few thought it an object to plant orchards for the fruit aloue. Apples at three dollars a barrel in a year of plenty was a thing undreamed of. Most of the old orchards planted in the last century have ceased to be productive, and many arc entirely gone.

And while the orchards have been decaying, our population has been rapidly increasing, and concentrating more and more in cities and villages, where apples are not produced. The new lines of intercourse by rail and steamer between city and country have advanced the price of this fruit, and of all other farm products. All classes are educated to the use of this fruit, and it is felt to be almost a necessity of living. The demand, though not as large, is as steady as for corn or potatoes. Any favored region that produces a surplus of apples, in a year of scarcity, is immediately drained of its treasures at high prices. There are few years that do not see thousands of barrels sent from central and western New-York into New-England, and in years of scarcity apples from Ohio, Michigan, and farther west, find a good market in the east.

The demand is also increased by new facilities for drying the fruit. This is done not only in the household by old methods, but by a machine inveuted for the purpose. Immense quantities are used in this form by families, and for ship stores, in long sea voyages. It pays very well in places remote from railroads when the fruit is plenty, to send it to market dried.

Besides these influences working at home, there is an ever-increasing demand for American apples abroad. The same varieties are fairer and finer flavored upon our side of the water, and several of our American apples have no rivals in the European market. Newtown Pippins are sold in the London market sometimes as high as nine dollars a barrel. This demand is likely to increase in coming years, even beyond our ability to supply it, as steam communication multiplies. Large quantities of apples also find their way to the West Indies, and to other tropical climates, in exchange for their fruits—oranges, lemons, pine-apples, and bananas. These fruits in our cities, brought by steam, are a fair indication of the abundance of ours in their seaports. This exchange of the fruits of different climates is one of the beautiful things of commerce. Pineapples and bananas were unknown to multitudes before the advent of sea-going steamers. They are now hawked about the streets of our seaports in hand-carts and wagons, about as plenty and cheap as apples, and find their way to our remotest villages.

These considerations should disabuse our minds of the notion not unfrequently cherished, that it will not pay to plant an apple orchard. The market is in no great danger of becoming glutted. This has never been, and is still less likely to be, in future years. The uses of this fruit will increase at home, and both in the dry and fresh state, will enter still more largely into our commerce. We doubt now if any part of the farm pays as well as the thrifty, well cultivated orchard. It can not fail to pay still better in the future. Our hearts warm at the sight of this ruddy fruit, hanging from the loaded trees, and at the memories that cluster around it, in our younger years—apple parings and other scenes of social festivity by the farmer's fireside.

Calendar of Operations for Sept., 1862.

[A glance over notes like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 38° 40′ and 40° 45′, but will be equally applicable further North and South, by allowing for latitude.]

Farm.

The second step toward the supply of the great staple crop—wheat—for 1863 is now to be taken, and it is of momentous importance that it be *well* taken. The first step of preparing the ground is, or ought to be, now completed, and the profits of next year's crop depend on its having been well done. One important thing may yet be done in addition to seeding, namely: top-dressing with lime, salt, plaster, well-rotted stable manure, guano, marl, muck, or whatever the nature of the soil most requires, which, well harrowed in just previous to or at the time of seeding, often proves a paying investment. The important work of underdraining heavy soils may be advantageously attended to this month. Gathering fruit, and other maturing products, is another important matter to be considered, in laying out farm work for the month. A good crop must be well taken care of, to bring full returns. All kinds of stock should be kept in good flesh. The regaining of lost flesh is always expensive.

Agricultural Fairs and Cattle Shows—Every man gains something by attendance at these gatherings, aside from the recreation and social enjoyment. No one can tell what he loses by staying away. It may be worth $100 to any man—one spends a dollar, goes and gets the benefit; another earns a dollar by staying at home—which is the best off? (See article on page 265.)

Barns—Need frequent inspection to see that they are well ventilated, free of vermin and stench, tight-roofed, well preserved with paint, and not liable to be fired through carelessness. A good lightning rod upon a building may save it and its contents.

Beans—Well cleaned and good beans always bring a high price in market; if cured without mussing, the haulm and immature beans are excellent sheep fodder.

Beeves—Select for fattening; feed some old corn if you have it. Keep them quiet whether stalled or in pasture.

Buckwheat—Shells badly if allowed to become too ripe before harvesting. (See page 305, July *Agriculturist*.)

Buildings—Erecting new and repairing old should not be delayed until cold weather.

Butter—This month and next put down for winter use, and for market. But it is about as well to throw it away as to pack it so that it will not keep. The amount that is annually lost to the country in spoiled butter is immense—all the result of ignorance or carelessness. (See p. 278.)

Cabbages—Give good cultivation; frequent stirring of the soil keeps them growing and makes them head well.

Cattle—Give them clean, cool places for rest and sleep, plenty of clean water, and if the pastures are short, cut corn fodder, or suckers from the field; give them inferior cabbage plants, pea straw, etc.; pull roots when they are crowded, and at any rate keep cattle well fed; the profits of the year depend upon it.

Cellars—Have a good one under the barn as well as the house, so that vegetables from which effluvia is liable to rise may be stored there, thus obviating the possibility of bringing disease into the household. See that causes of offensive odors are promptly removed from the cellars.

Cisterns—Every house should be provided with a good one, and it should be thoroughly cleaned out, and repaired, if needing repairs, between now and the season of Fall rains. Should it happen to be dry, be sure to clean it.

Corn—Will soon be ripening. Select the earliest large ears on prolific stalks for next year's seed. Topping, or cutting off the stalks above the ears, is not so good a method as cutting the stalks close to the ground, and setting into stooks. See Prize Article in April No., page 110. There is a saving in fodder, in the manure heap, to the land, and of labor.

Draining—Standing water is hurtful to almost every farm, orchard, and garden crop. It is better to get rid of it by surface ditching, than to let it evaporate or soak away. In many instances low places may be drained by digging or boring (with a post auger) down through the clay stratum into a looser one that will permit the water to soak rapidly away. While the low places are dry, or comparatively so, is a favorable time to bore or dig down. In many places it will be easier to dig a large hole for a well several feet deep, than to conduct the water off either with tile or ditches. Those who have dug wells upon their farms can form an idea as to the probable distance down to a loose sand or gravel stratum.

Eggs—Generally bring a good price in Winter, yet it is well to sell when fresh, if the price is remunerative. The shell of the egg is porous, and unless encased in a way that will exclude the air, it will not keep well. Packing in salt is a very good way, and also dipping in melted tallow and packing in chaff is highly recommended. The tallow closes up the pores, and the chaff lessens the danger of breaking.

Fences—Let timber for posts, etc. Rotted posts should be replaced before the high winds of Autumn tend to break them off, and sound ones with them. And in the Spring one's time will be more valuable than at certain seasons this Fall. Where fences are indispensable, let them be good ones. Clear others away.

Flax—Should be pulled as soon as the straw becomes yellow, and the seed, within the capsule, has assumed a pale brown color. (See page 107, April *Agriculturist*.)

Grain—Thrash as fast as practicable, and market as soon as fair prices prevail. The degree of risk in keeping depends on the conveniences for storing. Grain in a good vermin-proof bin is perhaps better than money in an uncertain bank, or at hand where it is liable to be frittered away for things not really necessary. Good judgment in this matter is quite as important as in growing.

Harvesting—Is a very important branch of farming. Good crops of any kind poorly harvested, are often less profitable than poor crops well harvested.

Manure—The farmer's "reserve force." Let it be promptly and continually "re-inforced." The dryness of the swamps usually renders getting out muck for composting easier now than at most other seasons of the year. Besides, the roads are good. The poultry and hog droppings, neglected during haying and harvest, should be gathered and composted. The present is of all others the most propitious time for gathering all sorts of vegetation for increasing the compost heap.

Plowing—Is always in order where land is idle and weeds are getting a start. It is far better to thus convert them into fertilizers than to let them become seed-bearers. The plow that runs deep enough to turn up a thin layer of new subsoil, adds new stores to the farm, which will be filled without additional labor.

Potatoes—Leave in the ground those where any appearance of the rot is in the field, and dig very late, after all have rotted that will. It will be well to try pulling and burning affected haulm, at least from the patch infected first. Plow this patch as soon as the potatoes are harvested, to convert weeds and haulm into manure, and leave the ground in better condition for next year.

Poultry—Should have free range among the grasshoppers, worms, etc., at least a few hours before sunset. (See article on page 268.)

Root Crops—Need frequent stirring of the soil around them during this baking season.

Rye—Should be sown at the same time and in the same manner as Winter wheat, but preferably a little later.

Sheep—Will need a little extra care now to keep them in good wintering condition.

Soiling Crops—Cut freely and feed wilted, if there is any lack of pasturage. Corn fodder should be cut and cured before danger from frost.

Sorghum—Cut as soon as the seed has ripened, and hurry its manufacture before a frost injures it. If exposed to frost grind up immediately, before having time to sour. Cut off the extreme tops for seed or fodder, before grinding. If for sugar, reject from a third to one half of the upper portion of the stalks.

Swine—Keep them from running too freely, supply them with clean bedding, and commence to fatten early. Those for your own use, at least, should not be *excessively* fat before killing. Some farmers wash off their hogs as often as once a week; the pork is better for it, and so is the health of the hog.

Timothy—Sow with Winter grain for meadow.

Turnips—Thin out late sown, and stir the soil amongst earlier ones.

Weeds—Expunge, extirpate, exterminate! make ashes of those that have gone to seed, compost of the rest.

Wheat—Get seed in early. Experience abundantly proves that it pays to drill it in, requiring less seed, placing it all at a depth where it is little liable to injury by frost, out of the reach of pigeons and poultry, securing a greater uniformity of growth and of ripening, and, by giving better access of air to its stalk, roots, and the soil, lessening the liability to rust, smut, etc. Pickle the seed to prevent smut. See prize articles in July *Agriculturist*.

Orchard and Nursery.

The earliest apples and pears have already been gathered, but others are daily ripening, and must be harvested, or they are lost. The abundant yield requires considerable labor to properly secure them. Where accessible to market, they should be hand-picked, or taken off with one of the various fruit pickers described in the *Agriculturist*, and sold as fast as gathered. If at a distance from market, or where prices are very low, bottle, make into cider, or dry them for Winter use. Of course late sorts should remain upon the trees until October.

Peach growers are once more rejoiced to see their trees bending beneath the burdens of well-ripened fruit, and their faith in peach-culture is again revived. After marketing and using freely, there will still be a good supply to bottle, can, or jug, for the coming Winter. Rest assured they will be a luxury then, even if they are a drug now, and in the abundance of the crop, do not forget to provide for future years, by saving pits from the most healthy trees. Bury or plant them before they dry.

Marketing fruit of all kinds, and especially the soft fruits, requires a great deal of care. If one is aiming to become known in market as a first class, reliable grower, whose fruit shall always be in demand, the first thing is to provide substantial baskets or boxes of uniform size, plainly marked, and do not face or top the packages with the finest fruit, thus laying yourself liable to the imputation of dishonesty by wishing to deceive. Remember, that reputation is to be secured; and if from no higher motive, let the packages prove true to indications, that they may find a ready market as truthful to appearance, and honest in quantity. Many a basket of fruit is discarded in market when it is found, upon pouring it out, that inferior, and even poor fruit is at the bottom. Pears should almost always be picked and sent to market before they are ripe, and peaches *always* while a little hard. They may either remain and soften on the dealer's hands, or be disposed of to retail purchasers while they are still firm. Of course the fruit must be handled with the greatest care to avoid bruising. Some of the largest and finest specimens may be selected to make up a few baskets or boxes which will command extra prices, and this will scarcely affect the sale of the others, as the more uniform the fruit, the better it sells.

Early provision should be made for a stock of manure to top-dress the orchard and nursery. A compost of muck and stable manure, with a sprinkling of ashes, will form a good dressing.

Nursery trees budded this season should be examined, and the bandage "slit" or loosened where it is cutting into the stock. Every thing about the commercial nursery grounds should be put in readiness for beginning the Fall business next month. Young trees should be well tended, plowing between the rows frequently to loosen the soil and keep down weeds. Unless sufficiently trimmed, give them their last pruning early this month, to preserve low branching trunks. Omit the pinching now, as it would tend to induce a new growth, which would not ripen before Winter.

Kitchen and Fruit Garden.

Gathering and marketing or storing, are the chief labors of the Kitchen Garden at this season, and no small amount of judgment, as well as energy, is required to do these in a manner that will enable one to reap maximum profits. Either ignorance or carelessness in gathering, marketing or storing garden products may prove as great disaster as they are liable to in cultivation. A potato bin or hole insufficiently protected from frost, or stored with decayed or decaying tubers intermixed, melons plucked before ripe; cucumbers packed in musty or leaky casks; seeds put away where dampness or mice will destroy them; pumpkins, etc., left within tempting sight of fence-breaking or trespassing cattle and swine; fruits bruised by reckless handling, etc.—these are only a few of the ways in which the previous labors of the season may be largely sacrificed, to say nothing of taking produce to market in such a shiftless state of preparation as to bring but second to fourth-rate prices. See to it, therefore, that these things are well and seasonably done. Wherever draining or trenching will be of advantage to the garden, push it forward whenever other work will permit. Strive to produce specimens of vegetables and fruits worthy of exhibition at your County Fair. It may enable you to sell seeds, plants, etc., at good prices.

Beans—Gather and put in a dry place as fast as they ripen. Before marketing, clean thoroughly. Unripe Limas dried are excellent for Winter use.

Blackberries—Remove the old canes and weak shoots, leaving one or two of the strongest for fruiting next season.

Cabbage and Cauliflowers—Keep late plants well hoed, and sow seed for plants for cold frames.

Celery—Earth up as often as once in two weeks with dry soil, taking care that no dirt be left on the crown or between the stalks. Tie with soft string or bass matting.

Corn—Save the earliest large ears on prolific stalks for next year's seed. Shave green corn from cob and dry. Cows will relish the stalks green or cured.

Cucumbers—Keep well watered; let early specimens ripen for seed. For sour pickles use small green ones; for sweet pickles, those nearly ripe are recommended.

Endives—Hoe and give liquid manure, treating like lettuce; gather and tie up the leaves for blanching.

Grapes—Leave until fully ripe before gathering, unless there is danger from frost. (See suggestions for packing for transportation on page 245, August *Agriculturist*, and for wine making on p. 277, this number.)

Hoe where weeds grow, or the soil needs stirring.

Hops—Gather and dry, and preserve poles for future use.

Manures—Let no source be overlooked. You want their help for next year's crop.

Melons—Place pieces of boards under those ripening, and turn the melons over occasionally. Gather when fully ripe and use or market. The sound from tapping on or snapping the melon with the finger nail is a good criterion to judge of the ripeness of a melon, the ripe melons giving forth a dull, dead sound, while that of an unripe one has more or less of ring to it.

Mushrooms—Beds may still be made. (See directions on page 213, July *Agriculturist*.)

Onions—Sow for sets to use for rare pies next Spring.

Parsley—Sow for use next Spring.

Pickles—See directions, pp. 246 and 279, *Agriculturist*.

Raspberries—Treat as directed for blackberries. House stakes for future use.

Spinach—Sow in drills 14 inches apart for next Spring.

Squashes—Pack Winter squashes away in a dry place, as soon as ripe, or before danger from frost.

Strawberries—Finish transplanting, and water when needed or mulch. Keep well loose, if not mulched.

Tomatoes—Make pickles, or catsup, or preserve in air-tight jars or bottles. See directions p. 279.

Turnips—Thin out, if needed, and keep well hoed. Bone-dust hoed in is a good manure.

Winter Cherries may be kept for winter use by packing in cotton with the hulls on, or they may be preserved.

Flower Garden and Lawn.

If properly attended to in the Spring, the flower garden is still "a thing of beauty." Many of the annuals and bedding plants are yet in bloom, and the later perennials, conspicuous among which is the dahlia, are out in all their splendor. The mistake of not planting a good supply of annuals and late perennials is too frequently made, which occasions a dearth of bloom in September and October. Now is the time to save seeds for another season. Select from marked stalks, which have ripened their seed, and which were designated on account of fine form and color, or a more double flower. Having gathered the seed, cut away the flower stalks of these and other plants out of bloom and not intended for seed.

Bulbs should be planted the last of September, if practicable. See full directions on a subsequent page.

Chrysanthemums will soon begin to flower. Keep well tied up, and cut out the weak shoots, leaving but few stalks in a place.

Cuttings for propagating plants should be made as soon as the wood is mature. Insert in a light, deep soil, with plenty of peat and sand worked in, and cover with a hot-bed sash, shading from the hot sun. They will soon root, and may be potted for Winter.

Dahlias ought to show finely now. Keep well tied up or the rains and winds will split them down. Mark them while in flower, giving the correct name where it is known, otherwise the color and form of the flower, and habit of growth. Remove decayed flowers as soon as they become unsightly.

Lawn—Keep free from leaves, and scatter a little seed on bare spots. Sow Winter rye, on ground prepared for a lawn, but which is not to be seeded until Spring. A thick growth of rye will look very well during Winter.

Seeds—Watch their ripening and collect before they are wasted on the ground. Mark each package with care. Mark with strings the finest late blooms, the seed of which it is desirable to save.

Verbenas and Petunias layered last month, may now be divided and potted for Winter blooming.

Weeds—Allow none to disfigure the ground or to sow seeds for a future crop. Burn those bearing matured seeds.

Green and Hot-Houses.

One of the first things to be done is to see that the houses are prepared to receive their Winter stock. If new ones are to be built, let them be put up at once. Before the close of the month, many of the more tender plants will need bringing in. They should never be left out until chilled by cool weather. See that pots are clean and plants properly cut back, and decayed leaves removed when set in Winter quarters. The houses should have abundance of air and sunlight for some time after being filled, or the change will affect the plants unfavorably. Collect a good stock of old turf, well rotted peat, sand, and manure for potting soil. Mix it early, for it improves by age. Lay in a supply of pots of various sizes to be in readiness for shifting the plants.

Having cleansed and painted the houses, attended to the glazing, arranged the furnaces, and brought in the tender plants, setting them tastefully in their appropriate places, begin at once to increase the stock by putting in cuttings of the several varieties needed. Sow a few desirable annuals at the same time to increase the number of Winter plants. The Cape and other house bulbs should now be potted and arranged for growing. Some of the hardy Spring blooming sorts may also be potted, and set in a cool place to be brought forward as wanted.

Camellias should be re-potted. They are now beginning to grow and require frequent waterings. It is not too late to bud and inarch.

Fire heat may occasionally be needed in some apartments to expel dampness and warm the air.

Grapes—The treatment must be governed by the different stages of growth. Give little water and abundance of air to those ripening, and frequent syringings to later sorts.

Potting—Most of the plants will need re-potting when brought in, although they have been growing in pots during the Summer. They will do better with a change of soil, and quite likely they require more room. All of the large number of house plants set in the borders in the Spring, are to be potted now. They should be shaded, after the operation, and watered freely. Many of the plants will be benefited by cutting back.

Apiary in September.

Prepared by M. Quinby—by request.

Should you hear a bee-keeper complaining that his hives were robbed by neighboring bees, and you should tell him that it was his own fault—neglect of some duty—you would be right nine times in ten. Although attention has been frequently called to this one point, but few seem to heed it. There is a general failure of honey-yielding flowers this month; some of the combs will be occupied with brood as long as honey is obtained; this brood hatches now, and of course there must be empty cells. The bees of a large colony are always restless, and on the lookout for honey while there are any cells unfilled. Any colony too weak to defend its stores, is liable—yes, almost certain—to be found, and its stores taken by force. This gives rise to vexations at home, and contentions with neighbors. A little care now is all that is needed. Examine each colony, and remove all that have not bees sufficient to defend their stores. Stock affected with foul brood will often appear stronger than they really are; they gain nothing by standing longer, and the consequences, if robbed by others, are serious. Remove them now. Any other condemned colonies, if strong enough to defend themselves, may be left until next month for the bees to all hatch out of the way. A queenless stock with sufficient honey, may be supplied with bees and queen from condemned colonies. If bees from a hive with foul brood are taken, they should be driven into an empty hive for a day or two, to use up the honey taken with them; otherwise they might with it infect the hive where they go. The honey in the diseased hives may be strained, after removing all the pupæ mixed with the brood. By purifying it, it will do to feed some light colonies next month. Next month will do to feed and unite light ones, but take care of the badly diseased and very light ones *now*.

Exhibition Tables at the Office of the American Agriculturist.

The following articles have been placed on our tables since the report for last month:

Fruits, etc.—*Currants*—La Versailles (extra fine), Cherry, White Grape, Imperial Jaune, Victoria, Imperial Red, La Fertile and Champaigne, from A. S. Fuller, Brooklyn, L. I.....Branches with Red and White Currants (very fine, and loaded with fruit,) and Fontainbleau, from Geo. H. Hite, Morrisania, N. Y.....Prince Albert currants from W. S. Carpenter, Rye, N. Y.....Cherry, Victoria, Prince Albert, variety for name, White and Red Grape, Red and White Dutch, Short-bunched Red, Black Naples, Champaigne, La Versailles, Gloire de Sabion, (very fine and most tastefully arranged for exhibition,) from E. Williams, West Bloomfield, N. J.....La Versailles Currants (extra fine), from D. J. Woolsey, Milton, N. Y.....Red Dutch Currants (fine), from Dr. I. M. Ward, Newark, N. J.....*Gooseberries*—Samples from J. G. Odell, Marshland, Staten Island.....Lancashire Lad, Whitesmith, Golden Drop, Lincolnshire Green, Pride of England, Washington, Crown Bob, Little Warrington, Ironmongers, from James Hunt, Flatbush, L. I.....American Seedling, Whitesmith, from E. Williams, West Bloomfield, N. J.....Crown Bob (fine), from J. P. Major, Williamsburgh, L. I.....Houghton's Seedling (spiral training), Geo. H. Hite, Morrisania, N. Y.....*Strawberries*—Russell's Prolific, from Geo. Clapp, Auburn, N. Y.....Great Austin, Wizard of the North, La Constante, Deptford Wife, Downer's Prolific, Seedling Eliza (all gathered July 16), from W. S. Carpenter, Rye, N. Y.....*Raspberries*—Belle de Fontenay, from W. S. Carpenter, Rye, N. Y.....Doolittle's Improved Black Cap, from L. A. Lawton, Hauppauge, L. I.....Improved Black Cap, Improved White Cap, Hudson River Antwerp, Ohio Everbearing, Belle de Fontenay, Brinckle's Orange, from E. Williams, West Bloomfield, N. J.....Clarke Raspberry, (extraordinary growth and vigor), from E. B. Clarke, New-Haven, Conn.....Monthly Raspberry, (white and fine-flavored,) from W. S. Carpenter, Rye, N. Y.....*Blackberries*—Dorchester, from E. Williams, West Bloomfield, N. J.....Green Blackberries, (remarkably curious) from Dr. Clowes, N. Y.....Red Blackberries, (fine and very fine-flavored,) from M. L. Force, Morristown, N. J.....New-Rochelle, from C. A. Cadman, Thompson's Station, L. I.....New-Rochelle, from A. C. Chamberlain, Novelty Gardens, Brooklyn, L. I.....New-Rochelle (very fine), from Chas. Rivinius, Morrisania, N. Y.....New Rochelle and Dorchester, from E. Williams, West Bloomfield, N. J.....Cultivated Wild Plums, called Egyptian Cherries (very fine), from Robert Jarvis, Newtown, L. I.....Apricots from P. I. Buchanan, 54th street, N. Y.....Very large and full branch of Apricots from A. C. Chamberlain, Novelty Gardens, Brooklyn, L. I.....*Apples*—Samples for name, from J. A. Brush, Brooklyn, N. Y.....Dutchess of Oldenburg, etc., from E. Williams, West Bloomfield, N. J.....Red Astrachan, Summer Queen, variety for name, Primate, from Dr. I. M. Ward, Newark, N. J.....River Streak, Julian, Early Harvest, Sine-qua-non, Early Catherine, Red Astrachan, Manomet, Benoni, Cloth of Gold, Early Red Margaret, Summer Hagloe, Sweet Bough, Summer Queen, Summer Pippin, Primate, Early Strawberry, Summer Rose, Gravenstein, Hawley, from Wm. S. Carpenter, Rye, N. Y.....*Pears*—Madeleine (branch extraordinarily full—tree planted eight years, yields a barrel of fruit this season), Rostiezer, Jargonelle, Dearborn Seedling, Rousselet Stuttgart, Doyenne d'Etc, Bloodgood, Beurre Giffard, Osband's Summer, from Wm. S. Carpenter, Rye, N. Y.....Early Windsor or Summer Belle (very full branch), from E. Williams, West Bloomfield, N. J.....New-Haven Seedling, from E. E. Clarke, New-Haven, Conn.....Vale, from Dr. Ell Ives, New-Haven, Conn.....Seedlings, from L. C. Lighthipe, Orange, N. J.....Roetzer, Bloodgood, Dearborn Seedling, from Dr. I. M. Ward, Newark, N. J.....Cuban and Fejee Island Tomatoes, from G. M. Usher, Port Richmond, Staten Island.

Flowers, etc.—Yucca gloriosa, Passiflora Decaine, Dahlias, Hollyhocks and cut flowers, from Mr. Cunningham, N. Y.....Cut flowers in variety, Carnations, Larkspurs, Gladiolus (100 varieties, very fine), from A. S. Fuller, Brooklyn, L. I.....Double Hollyhocks, (from imported prize seed—very beautiful), from Wm. S. Carpenter, Rye, N. Y.....Roses, Dahlias, Carnations, Double Zinnias, Phloxes, Coboea Scandens, etc., (very fine) from C. S. Pell, N. Y. Orphan Asylum.....Wild Prairie flowers, from A. Hitcheock, Farmers' Grove, Minn.....Cut flowers in variety, Dahlias, from Mrs. O. Judd, Flushing, L. I.....Seedling Phloxes, Cut flowers, Asters, Marigolds, Portulaccas, etc., from W. F. Heins, Woodstock, N. Y.....Baptisia tinctoria, or Wild Indigo, from Long Island.....Tiger Lily (extraordinary growth, 5 ft. 5 in. from ground to top of stalk), from Thos. B. Kinsman, Jersey City, N. J.....Double Zinnias, Dahlias, Cut flowers in variety, from E. Williams, West Bloomfield, N. J.....Achimines Burgmanii, A. grandifolia, from Thomas Kearns, gardener to Wm. Shaw Esq., Staten Island.....Cut flowers, Larkspurs, Lilies, Phloxes, Hardy Plumbago, Mahonia aquifolium, Mahonia Berry, Berberis Vulgaris, Barberry, Berberis Canadensis, American Barberry, from A. C. Chamberlain, Novelty Gardens, Brooklyn, L. I.....Caper Spurge, Euphorbia Lathyris, Introduced from Europe.....Coreopsis tinctoria, from Mr. Hayward, Brooklyn, L. I.....Asters, Fuchsias, Sugar Cane, Black Warrior Phlox, Centaurea, (in pots) from O. Judd, Flushing, L. I.....Stipa pennata, (a very fine feathery grass,) from John G. Waite, Englewood, N. J.

Vegetables, Seeds, etc.—Oats (5 ft. 10 in. high), from E. G. Faile, West Farms, N. Y.....California Mercer Potatoes, (very early) from W. F. Heins, Woodstock, N. Y.....Three stalks of Marrowfat Peas—10 ft. to 10 ft. 7 in. high—(very tall indeed,) from A. S. Nash, Westport, Conn., per Dr. Bouton, Center-st., N. Y.....Egyptian or Minnesota White Spring Wheat, from J. L. Armstrong, Lake City, Minn.....Cucumber (fine, over 3 lbs. weight,) from A. L. Winship, Flatbush, L. I.....Egg gourds (curious), from J. B. Bryant, Brooklyn, L. I.....Specimen of Heather (Heath Grass) from Sheep land of Jonathan Peel, Knowlmere Manor, Clitheroe, Yorkshire, England, by O. Judd.

Miscellaneous.—Belemnites, (fossil cuttle-fish bones) from the green-sand marl formation at Holmdel, N. J., by J. C. Taylor.....Sorgho Sugar (very good—made on Cook's Evaporator,) from Blymyers, Bates & Dav, Mansfield, Ohio.....Rocky Mountain Goat horns (very large),

from W. A. King, N. Y.....Wool from the side of a *Black-faced Sheep*, (which took the first prize at the Royal Agricultural Society's Show, England), viz.: a Ram called "Ayrshire Laddie," 1 yr. and 2 mos. old, bred by Capt. Kennedy, of Glenapp, Ballantrae, Ayr, Scotland, and exhibited by Jas. Drife, of Barr, Sanquhar, Dumfries, Scotland, by O. Judd.....Wool from a pure bred Leak ram, 4 yrs. 3 mos. 1 week old, called "Son of the Mountain King," bred by Jas. Duerden, Marsden, Colne, Lancashire, England, exhibited by Jonathan Peel, Knowlmere Manor, Clitheroe, Yorkshire, England, by O. Judd Wool from Black-faced Sheep, Ram "Donald," 2 yrs. and 2 mos. old, bred by David Toyer, Knowehead, Campsie, Sterling, England, exhibited by Jas. Drife, of Barr, Sanquhar, Dumfries, Scotland, by O. Judd.....Wool from Black faced Sheep, Ram "Bob," 2nd prize, 1 yr. and 2 mos. old, bred by David Toyer, Knowehead, Campsie, Sterling, England, exhibited by James Drife, Barr, Sanquhar, Dumfries, Scotland, by O. Judd.....Wool from *French Merino Ram*, 3 yrs. 6 mos. and 10 days old, bred and exhibited by Chas. Lefebore of St. Escobille, Seine and Oise County, France.....Wool from a pure Leak breed ram, "Mountain King," 7¾ yrs. old, bred by W. Windup, Hould Top, Silsden, Yorkshire, and exhibited by Jonathan Peel, Knowlmere Manor, Clitheroe, Yorkshire, England—the above brought by O. Judd from Royal Agricultural Society's Exhibition, held in London, England, June 23d, 1862.

Agricultural Exhibitions for 1862.

STATE AND 'NATIONAL' FAIRS.

Name.	*Where held.*	*Date.*
National Wine Fair, (U. S.)	Washington, D. C.	Jan. 14 to 63
National Horse Fair	Williamsport, Pa.	Sept. 2– 5
World's Horse Fair	Chicago, Ill.	" 2–16
Illinois (Horticultural)	Chicago	" 8–13
Wisconsin	Madison (postponed.)	
Wisconsin Agr. & Mech.	Milwaukee	" 9–12
New-Hampshire	Concord (postponed.)	
Vermont	Rutland	" 9–12
Ohio	Cleveland	" 16–19
Kentucky	Louisville	" 16–20
Minnesota	St. Paul	" 17–19
Canada East	Sherbrooke	" 17–19
American Pomological Soc.	Boston, Mass.	" 17–19
Canada West	Toronto	" 22–26
Michigan	Detroit	" 23–26
Illinois	Peoria	Sept. 29—Oct. 4
New-York	Rochester	" 30 " 3
Iowa	Dubuque	" 30 " 3
Pennsylvania	Norristown	" 30 " 3
Indiana	Indianapolis	" 30 " 3
New-Jersey	Newton	" 30 " 3
California	Sacramento	" 30 " 4
Connecticut	Hartford	Oct. 7–10

COUNTY FAIRS.

MAINE.

Waldo	Belfast	Oct.	1– 3
North Franklin	Phillips	"	8– 9
Sagadahoc	Topsham	"	14–16
North Waldo	Unity Village	"	15–16

NEW-HAMPSHIRE.

Merrimack River	Nashua	Sept.	17–18
Rockingham	Exeter (postponed.)		

CONNECTICUT.

Fairfield	Norwalk	Sept.	23–26
Windham	Brooklyn	Sept. 30—Oct.	2
Middlesex	Middletown	Oct.	1– 3

VERMONT.

River Valley Soc	Hartford	Sept.	16–18
Franklin	Fairfield		24–25
Caledonia	St. Johnsbury	Sept. 30—Oct.	1

NEW-YORK.

Saratoga	Saratoga Springs	Sept.	2– 5
Broome	Binghampton		9–12
Chautauqua	Panama		10–12
Tonawanda Valley	Attica		12–13
Jefferson	Watertown		17–19
Delaware	Franklin		17–19
Queens	Newtown		18–19
Alleghany	Angelica		23–24
Susquehanna Valley	Unadilla (Otsego Co)		23–24
Cortland	Cortland		23–25
Cattaraugus	Olean		23–25
Ulster	Kingston		23–25
Brookfield Union	Brookfield		24–25
Chenango	Norwich		24–26
Ontario	Canandaigua		24–26
Steuben	Bath		24–26
Chautauqua (Union)	Fredonia		21–26
Tompkins	Ithaca		24–26
Livingston	Lakeville		25–26
Washington	Salem	Sept. 30—Oct.	1

TOWN FAIRS.

Smithville	Smithville Flats	Sept.	4– 5
Oxford	Oxford	"	16–18
Rosendale	Rosendale	"	16–18
Afton	Afton	"	18–19
Aurora Union	Aurora	"	24–25
Harpursville	Harpursville	Oct.	1– 2
Columbia	Columbia	"	13–15
Dundee Union	Dundee		15–17

NEW-JERSEY.

Monmouth	Freehold	Sept.	17–18
Burlington	Mount Holly	Sept. 30—Oct.	1

PENNSYLVANIA.

Erie	Erie	(Postponed.)	
Bucks	Newtown	Sept.	24–25
Susquehanna	Montrose	"	24–25
Beaver	Beaver	"	24–26
Washington	Washington	"	24–26
Chester	Westchester	"	26–27
Lawrence	New Castle	Oct.	1– 3
Luzerne	Wilkesbarre	"	1– 3
Snyder	Middleburg	"	1– 3
Crawford	Conneautville	"	1– 3
Indiana	Indiana	"	1– 3
Columbia	Bloomsburg	"	15–18

OHIO.

Cuyahoga	Cleveland	Sept.	2– 5
Fayette	Washington C. H.	"	3– 5
Coshocton	Coshocton	"	9–12
Franklin	Columbus	"	9–12
Medina	Medina	"	9–12
Clinton	Wilmington	"	10–12
Defiance	Defiance	"	10–12
Highland	Hillsborough	"	10–12
Pickaway	Circleville	"	10–12
Carroll	Carrollton	"	15–16
Columbiana	New-Lisbon	"	23–25
Clermont	Bantam	"	23–26
Huron	Norwich	"	24–26
Knox	Mount Vernon	"	24–26
Ashtabula	Jefferson	"	24–26
Miami	Troy	"	24–26
Loraln (Union)	Wellington	"	24–26
Portage	Ravenna	Sept. 30—Oct.	2
Lake	Painesville	" 30	" 3
Shelby	Sidney	" 30	" 3
Erie	Erie	" 30	" 3
Champaign	Urbana	Oct.	1– 3
Hardin	Kenton	"	1– 3
Harrison	Cadiz	"	1– 3
Seneca	Tiffin	"	1– 3
Summit	Akron	"	1– 3
Trumbull	Oak Hill	"	1– 3
Wayne	Wooster	"	1– 3
Morrow	Mount Gilead	"	1– 3
Tuscarawas Valley	Masillon	"	1– 4
Morgan	McConnellsville	"	7– 9
Tuscarawas	N. Philadelphia	"	7– 9
Richland	Mansfield	"	7– 9
Williams	Bryan	"	7– 9
Delaware	Delaware	"	8–10
Greene	Xenia	"	8–10
Clark	Canfield	"	8–10
Union	Marysville	"	8–10

INDIANA.

Morgan	Centerton	Sept.	2– 5
Sullivan	Carlisle	"	3– 5
Decatur	Greensburg	"	16–19
Wabash	Wabash	Oct.	7– 9
Posey	New-Harmony	"	7– 9
Fulton	Rochester	"	10–11

ILLINOIS.

Cass	Virginia	Sept.	2– 4
Henry	Cambridge	"	3– 5
Morgan	Jacksonville	"	9–12
Vermillion	Catlin	"	9–12
Bureau	Princeton	"	10–12
Coles	Charleston	"	10–12
DeKalb	Sycamore	"	14–17
Grundy	Morris	"	16–18
Hancock	Carthage	"	16–19
Winnebago	Rockford	"	16–19
Montgomery	Hillsborough	"	16–19
Whiteside	Morrison	"	16–19
Dupage	Wheaton	"	17–19
Carroll	Mt. Carroll	"	17–19
Kankakee	Kankakee	"	17–19
Pike	Pittsfield	"	17–20
Champaign	Urbana	"	21–24
Macon	Decatur	"	22–26
Sangamon	Springfield	"	22–26
Boone	Belvidere	"	23–25
Mercer	Millersburg	"	23–25
Logan (Union)	Atlanta	"	23–26
Macoupin	Carlinville	"	23–26
Knox	Knoxville	"	23–26
Jo Daviess	Galena	"	23–26
Kendall	Bristol	"	23–25
Richland	Olney	"	24–25
Marion	Salem	"	24–25
Tazewell	Tremont	"	24–26
Randolph	Sparta	"	24–26
DeKalb	Sycamore	"	24–26
Kane	Geneva	"	25–27
LaSalle	Ottawa	Sept. 29—Oct.	1
Union	Warren	" 29	" 1
Jasper	Newton	Oct.	1– 3
Jefferson	Mount Vernon	"	1– 3
Shelby	Shelbyville	"	1– 4
Lee	Dixon	"	6– 9
Christian	Taylorville	"	7–10
Warren	Monmouth	"	7– 9
St. Clair	Belleville	"	7–10
Madison	Edwardsville	"	7–10
Greene	Carrollton	"	7–10
Edgar	Paris	"	8–11
Piatt	Monticello	"	8– 9
Fulton	Lewestown	"	8– 9
McHenry	Woodstock	"	8–10
Moultrie	Sullivan	"	8–11
Stephenson	Freeport	"	14–17
Monroe	Waterloo	"	15–17

CANADA.

North Lanark	Almonte	Sept.	16—
Brockville	Brockville	"	18–19
Russell	Auburn	"	30—
North Simcoe	Barrie	Oct.	1
South Simcoe	Bradford	"	2—
Grenville	Prescott	"	8—
Stormont	Cornwall	"	8– 9
Durham West	Newcastle	"	9–10

IOWA.

Audubon	Green's Mill	Sept.	2– 3
Mahaska	Oskaloosa	"	3– 4
Marshall	Marshall	"	10–11
Polk	Desmoines	"	15–16
Benton	Vinton	"	17–19
Washington	Washington	"	17–18
Hardin	Eldora	"	17–18
Butler	Butler Center	"	17–18
Guthrie	Guthrie Center	"	17–18
Harrison	Magnolia	"	17–18
Wheatland	Wheatland	"	17–19
Chickasaw	New Hampton	"	18–19
Lucas	Charlton	"	18–19
Scott	Davenport	"	22–25
Cedar Valley	Cedar Falls	"	23–25
Linn	Cedar Rapids	"	23–25
Jones	Anamosa	"	24–26
Floyd		"	24–26
Bremer	Waverly	Oct.	8– 9
Jackson	Maquoketa	"	9–10
Cedar	Tipton	"	14–16

MICHIGAN.

Van Buren	Paw Paw	Sept.	22–24
Kalamazoo	Kalamazoo	"	24–26
Monroe	Monroe	Oct.	1– 2
Shiawasse	Owosso	"	2– 3
Jackson	Jackson	"	8–10

WISCONSIN.

Balmouth		Sept.	9–11
Fond du Lac	Fond du Lac	"	16–18
Racine	Union Grove	"	16–18
Green Lake	Berlin	"	17–18
Sheboygan	Sheboygan Falls	"	17–18
St. Croix	Hudson	"	17–18
Jefferson	Lake Mills	"	24–25
Columbia	Portage	"	24–26
Adams	Friendship	"	24–26
Eau Claire	Eau Claire	Oct.	2– 3

KANSAS.

Lawrence	New Castle	Oct.	1– 3
Jefferson	Osawatomie	"	15—16

KENTUCKY.

Boyd	Ashland	Sept.	16–18

MINNESOTA.

Union	Hampton	Sept.	11–12
Rice	Faribault	"	16—
Ramsey (with State)	St. Paul esteem	"	17–19
Dodge	Waseoja	"	24–25

CALIFORNIA.

San Joaquin	Stockton	Sept.	9–12
Santa Clara	San Jose	Sept. 30—Oct.	3
Contra Costa	Pacheco	Oct.	7–10

NEW-BRUNSWICK.

Kings Co. Central	Hampton Ferry	Oct.	8—

The Address at the N. Y. State Fair,

is to be delivered by Robt. J. Breckenridge, D.D., LL.D., of Ky., whose devotion to the cause of the Union, involving the sundering of friendship and paternal, and other strong family ties, has enshrined him in the hearts of the American people. Dr. B. is well known as an enthusiastic Agriculturist, and his address will doubtless be appropriate and valuable.

Number of Pounds in a Bushel

IN THE DIFFERENT STATES.

The following table is published to answer the inquiries of several subscribers. It is as complete as we have means at hand to make it. We shall esteem it a favor to have any additions or corrections made to it, and will republish the table if we receive such. The letter m, signifies sold by measure.

ARTICLES.	New-York	Vermont	Pennsylvania	Indiana	Iowa	Illinois	Wisconsin	Michigan	Massachusetts	Rhode Island	Connecticut	Kentucky	New-Jersey	Virginia	Ohio	Canada
Wheat	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Rye	56	56	56	56	56	56	54	56	56	56	56	56	56	56	56	56
Corn	58	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Oats	32	32	32	32	32	35	32	32	32	30	30	30	32	32	30	34
Barley	48	48	47	48	48	48	44	48	48	46	46	48	48	48	47	48
Buckwheat	48	48	50	42	32	40	42	48	48	46	52	50	46	48	48	
Clover seed	60	64	60	60	60	60	m	m	m	m	60	64	60	60	60	60
Timothy seed	44	42	45	46	45	m	m	m	m	m	45	m	45	m	48	
Flax seed	55	56	56	56	m	m	m	m	m	m	56	55	m	56	m	56
Hemp seed	44	m	44	m	m	m	m	m	m	m	m	m	m	m	m	
Blue grass s'd	14	m	14	m	m	m	m	m	m	m	m	m	m	m	m	
Apples, dried	29	28	30	28	24	28	m	m	m	m	m	m	m	m	28	22
Peaches, dried	33	33	28	33	m	28	m	m	m	m	m	m	m	m	m	22
Plums, dried			24	m	m	m	m	m	m	m	m	m	m	m	m	
Coarse Salt	56	50	85	50	m	50	m	m	70	m	70	m	50	m	50	56
Fine Salt	56	56	50	62	50	m	50	m	70	m	70	m	50	m	50	56
Potatoes	60	m	60	m	60	60	m	m	60	60	60	m	60	m	60	
Pease	60	m	m	m	m	m	m	m	m	m	m	m	m	m	m	60
Beans	62	56	m	60	m	60	m	m	60	m	60	m	60	m	60	
Castor Beans	46	m	46	m	m	m	m	m	m	m	m	m	m	m	m	
Onions	57	m	57	m	57	m	57	m	50	50	m	m	m	m	m	
Corn Meal			50	m	m	m	m	m	50	m	50	m	m	m	m	
Mineral Coal			70	m	m	m	m	m	m	m	m	m	m	m	m	
Rye Meal									50	m	m	m	m	m	m	
Beets									60	m	m	m	m	m	m	
Ruta Bagas									60	m	m	m	m	m	m	
Carrots									45	m	m	m	m	m	m	
Parsnips									45	m	m	m	m	m	m	

Containing a great variety of Items, including many good Hints and Suggestions which we give in small type and condensed form for want of space elsewhere.

SPECIAL ATTENTION, is invited to the business notices in this paper. Sundry General Premiums are offered on pages 281-2. Also some extra premiums of value at this time, page 288. Please note *Strawberry Premiums*, Maps, etc. The offer of the remaining numbers of this year *free* will be a special stimulus to new subscribers, and assist in making up premium clubs. Mr. Judd will be home in season to take the general oversight of the next issue of this journal, and after his respite, he will doubtless be able to add much to the spirit and interest of the future numbers.

Note to Crop Reporters.—We earnestly invite all to fill out the September blanks, and with special care as the final reports for the year. These reports are the most reliable, and by far the most systematic and complete published in the world. They are looked to by dealers, by the general press of this country and abroad. They are of most use, however, to farmers themselves, as indicating the general yield of the different crops, and the probable prices. The September reports vary somewhat from the previous month, in giving the results of the haying and harvesting. Please send them in promptly on or before the 10th. We can not wait for those arriving after the 15th.

Mr. Taylor's Sale and Letting of Sheep, on September 3d, should not be forgotten amid the excitement of the draft and other war matters. The occasion will be one of interest both to those desiring to purchase or rent South Down Sheep, and to farmers generally. In England, such sales and lotteries attract hundreds and even thousands of persons from all parts of th kingdom and from other countries. We hope to meet a large delegation of our readers on the steamboat which leaves the foot of Robinson-street at 9 A. M., on the day of sale. For particulars see advertisement on page 255, August *Agriculturist*.

A Convention of Wool Growers of Vermont will be held on the fair ground at Rutland, Sept. 9th. All interested in the production of wool are invited.

American Pomological Society.—The Biennial meeting commencing Sept. 17, at Boston, will doubtless be attended by every grower and lover of fruit, who can possibly be present. This society has done much to improve the growth and quality of our fruit, and is worthy of general co-operation.

Employments for Women.—Mr. Judd, writing from Germany, says: "....I have noticed here, and indeed all through England, France, and Switzerland, that women fill very many stations occupied by men in our country, such for example, as clerks in all kinds of retail establishments, and in railway stations, etc., etc. I may say that the employment of women as clerks in shops, is the rule, the employment of men the exception. The war, at best, will disturb the natural equalization of sexes; the European practice should and must come into vogue in our country, and at no time could the 'reform' be better inaugurated than now, when a million or more men are away in the army.....It will be well to invite suggestions on this subject for the columns of the *Agriculturist*. Let our journal, devoted as it is, part, to the Household, do its share toward promoting the change."

Clubbing to Equalize the Draft.—If of five men subject to draft, only one is taken by lot, the other four *ought* to share with him in some way. The following agreement, signed by about twenty of our colt, qualntances, seems to be the right thing, and we present it to the readers of the *Agriculturist* as worthy of imitation:

"We, the undersigned, do mutually covenant and agree that, in case one or more of us be drafted to do military duty in the war now waging, and the person or persons so drafted shall procure a substitute, we, the undersigned, will share equally the cost of such a substitute. And we further agree, in case the person or persons so drafted choose to go and do said military duty, we, the undersigned, will pay to him or his order, the amount of cost for such a substitute, dividing the cost equally between us. And we hereby appoint [the names of three persons are here inserted] as Executive Committee, whose duty it shall be to decide what price shall be paid the substitute or persons consenting to serve in the war; to collect and disburse, and make assessments, and decide all questions that may arise in executing the provisions of this agreement. This covenant made and signed this 11th day of August, 1862. As witness our hands."

Cultivating Wheat.—John Walting, of Clinton Co., Mich., writes that last Autumn he set aside a small portion of a wheat field, and drilled in the seed in rows 8 inches apart, and hoed it in Spring, but that at harvest it yielded almost nothing, while the rest of the field gave a good crop. We can only account for the failure by supposing that the earth was disturbed or heaped up too much around the roots. It is worth while to make another trial, and only hoe enough to kill any weeds that may grow. Whether salt or lime, or both, may be useful on your soil, may be best determined by trial on a plot by the side of another without the application.

Variegated Plants.—"L. W. S.," Mc. You can procure them of any of the larger nurserymen and florists, here or in Boston. Flower seeds like the Drummond Phlox, Pansies, Mignonette, etc., require very close watching to save them.

Treatment of Potato Seeds.—W. C. Comstock, Fairfield Co., Conn. Either dry the potato balls, and rub the seed out, or mash and wash them. Keep in dry place, and sow as other seeds in the Spring, covering with half-inch fine soil. The yield will be potatoes of the size of marbles. It takes two or three years for them to attain size and character.

Fancifully Colored Fruit.—C. S. Rust. You will be able to fasten the paper in which the designs are cut, which you wish to have photographed (drawn by light) on the fruit, by using sheets large enough to envelop the apple or pear, and tying it securely about the stem, and also below the fruit. Let us know how you succeed.

A Cistern as an Ice-Vault.—"J. C. C," of N. Y., has a cistern 9 feet in diameter, and 9 feet to crown of arch, which he wishes to use as an ice-closet, and asks if it will hold ice enough to keep through the season, and how to proceed to secure the least waste. We think that amount of good clear ice would keep if in large and solid blocks, well packed, while at a low temperature, and surrounded with a lining of straw, or perhaps of clean saw-dust, 8 inches to a foot thick, a pipe being provided, through which to drain off or pump out the water from the melting ice. Such an ice-closet would doubtless furnish a cool place for keeping meats, fruits, and other perishable articles, in hot weather.

Wild Flowers of Wisconsin.—The preserved flowers received from A. Hitchcock, of Greene Co., Wis., are: (1) *Phlox bifida*; (2) *Polemonium reptans*, Greek-valerian; (3) *Castilleja coccinea*, painted cup, (red,) and the variety *lutea* (yellow); (4) *Lithospermum canescens*, Alkonet; (5) *Lonicera flava*, yellow honeysuckle; (6) *Phlox divaricata*. They are all pretty, and worthy of cultivation.

A Rare Peony that does not Flower.—Root-pruning might help it. If very vigorous, divide it, and make new plants. Work in lime or wood ashes.

Flowering Plants in Cellars.—"Delia." All you need to do is to keep them in a dormant state. For this purpose, give them no more water than is just necessary to keep them from drying up, and keep them from all heat, like that from a neighboring furnace. Examine them once a fortnight.

Hybrid Perpetual Roses for the Lawn.—"E. G." By your inquiry, you mean, we suppose, those which are of moderate growth, and are therefore better suited for a bed on the lawn, than the tall growers would be. We recommend Giant of Battles, Pius Ninth, Duc D'Aumale, Baron Haller, Dr. Arnal, Baron Provost, Compte de Paris, Jules Margottin, Wm. Jessie, Mad. Laffay, Mad. Rivers, Duchess of Sutherland.

Auricula.—"J. L.," Mich. This flower is common enough among florists and amateurs, but is not yet popularized in this country, though it deserves to be.

Trailing Plant for a Vase.—"D. S." The periwinkle, (often called *myrtle*, improperly,) will not answer well in your vase, exposed as that is to the sun, and where it will seldom get watered. Some persons use the verbena, petunia, lobelia gracilis, and even scarlet geraniums. But one of the simplest and prettiest things is the Moneywort, (*Lysimachia nummularia*,) which needs watering only once a week or ten days, and whose trailing habit is similar to that of the periwinkle. For a symmetrical, classic vase, standing on a terrace or parapet, no plant is so suitable as the Century-plant. If you have a large, handsome vase, set on an appropriate pedestal, the upper rim of the vase just level with the eye of the spectator, put no plant in it. It is designed for a piece of sculpture, and should not be degraded into a flower-pot.

Geraniums Bloom Year after Year.—Dr. J. V. Riggs, Schenectady Co., N. Y. The geranium is a perennial, and the same plant will bloom for many years; but in your latitude, and indeed in any latitude where subject to freezing, they require to be kept in a green-house, or in the cellar during winter. We have frequently kept them in the cellar, setting them in pots or boxes of earth, in autumn. Young plants, however, are most desirable, and these are easily propagated. The cuttings or trimmings, or small pieces of them, will take root and grow readily when stuck into the soil and kept gently watered, and shaded for a few days. Your fine varieties may thus be rapidly multiplied.

Dwarfing Pears, etc.—"Utah." The dwarfing is occasioned by the smaller capacity of the quince roots—or other stock used for this purpose—to afford nourishment. Pruning only keeps the head in the desired shape. Roots sometimes strike from the pear above the quince stock, increasing the size of the tree.

Soil for Cranberries.—"R." Cumberland, R. I. Soil of the nature of beach sand is best for cranberries. The soil you describe—muck, underlaid by putty-like clay—is not suitable. By removing the top sod and substituting beach sand, if the plot can be properly overflowed, you may perhaps secure tolerable success.

To Keep Chestnuts.—Chestnuts may be kept in an ice-house for an indefinite time as fresh as when first gathered.

Best Manure for Strawberries.—C. S. Rust, Oswego Co., N. Y. On some soils strawberries do pretty well without manure. Muck, leaves, old sods, etc., composted 6 months with barn-yard manure, are the best. Guano serves as a temporary stimulant, used on land previously manured, but its effects are not lasting. Wood ashes are excellent, added to the soil, especially if the land be heavy or damp.

Green Blackberries.—Not the green, unripe fruit, but deliciously sweet and delicately formed berries, of a pea-green color, very distinct from the "white" sort, are exhibited at the *Agriculturist* office by Dr. Clowes of this City, who found them growing wild in Westchester Co. In shape they are long and tapering, and of medium size.

Cultivate Blackberries.—Letters from "Young Farmer" of Pa., and "J. W." of Ohio, and one or two others, indicate that the spirit of the article on Blackberries (page 241) was not fully understood. The aim of our associate evidently was to enforce *more care* in the culture and training of the plants. The *Agriculturist* has continually, and still does, advise *every* family to have its plot of cultivated blackberries. The editor of this paper first brought into general notice the New-Rochelle variety, and has labored to extend its culture, though without a penny's interest in the sale of plants. Our own experience and observation is, that after strawberries, a plot of ground can not be turned to better account than to fit it well, plant it with improved blackberries, and cultivate and train them carefully. Thousands of families who have followed our advice, are just at this season luxuriating in an abundant supply of this pleasant and healthful fruit.

Putty for Bleeding Grape Vines.—"N. N. H.," Ill., names this as a remedy. Rub the putty against the grain of the wood, or bind on with a cloth.

Coal Ashes for Peach Trees.—"J. O. S.," of Northampton Co., Pa., affirms that sifted coal ashes spread around under his peach trees to the depth of 5 or 6 inches, and a wash of whale-oil soap applied to the trunks twice a year, have proved of great benefit.

The Dwarfs.—Barnum is not all humbug. Since cracking the famous Nutt, (the Commodore,) people have everywhere accused him of having revamped Tom Thumb. To silence such cavilers, Mr. Barnum has now brought Gen. Tom Thumb and Commodore Nutt both together in the Museum, where any doubter can see them side by side. The Commodore has our vote as the smallest and smartest little man. Gen. Thumb has latterly too much the air of a self-satisfied, corpulent Englishman, to suit our democratic notion.

Curled Leaf in the Peach Tree.—A. R. Ashton, Burlington Co., N. J. We have seen no satisfactory explanation, and put it down with the potato rot, entil further developments.

Worms in Plums.—Mrs. D. F. Newton, Alleghany Co., N. Y. The worms hatching in the crescent shaped scars on the plums are caused by the curculio, or

plum weevil, which deposits its eggs there. You will see frequent allusions to it in the former numbers of the *Agriculturist*, and it is fortunate that this is its first appearance in your locality.

The Peach Borer.—"H. S." Have you tried coal ashes spread on the soil over the roots? A surer remedy, however, is to first dig out the borers with penknife or wire, then fill the holes with powdered sulphur. Afterward, surround the trunk with tarred paper.

Whale oil Soap—What is it?—J. A. Arnold, Saginaw Co., Mich. This is a residuary product in the purification of the crude whale oil as it is brought in by the whalemen. It is a black, oily soap, often called "black-soap." If dissolved in hot water, the oil partly separates; it should therefore be soaked in cold water and then when dissolved, it carries the superfluous oil with it. It has a disagreeable odor, adheres better than other soap and is very cheap. Of course it must be obtained directly or indirectly from the whale oil depots. It is kept on sale by Eastern implement and seed dealers.

Coal Tar for Plants and Bugs.—"A. P.," Vt., tried it around cabbages, it killed them. A neighbor tried it around melons; it killed them. He put the pumpkin bugs into the tar; it did not kill them. Rather a dangerous weapon, safer at the muzzle than at the breech!

Ant Hills in Flower Beds.—"S. F. D," Peru. We should scatter them with salt. They do not relish soap suds and liquid manure.

Remedies for Striped Bugs.—"A. F.," Bakersfield, Vt. A box with a glass cover, or millinet cover—A powder of four parts plaster and one of Peruvian guano, put on with dredging box, immediately after every rain—Strong quassia water, put on with sprinkler—Dead clams, or any other offensive animal matter—A chicken coop close by—Toads—Thumb and fingers applied every morning when the dew is on—Frequent watering with liquid manure. We have faith in all these remedies, especially the last four.

Obtaining the Agriculturist under Difficulties.—A subscriber in Washington Co., Iowa, in sending his dollar for the *Agriculturist*, says, that to obtain the money, he went *two* miles into the timber, chopped a load of wood, and hauled it *ten* miles to market. We are gratified at finding the journal so highly appreciated. It ought to be a good paper when such sacrifices are made to obtain it; we *try* to make it so, and shall keep trying.

Squirrels Carnivorous.—A lady subscriber affirms that she saw the common striped squirrel or chipmunk carry off a chicken, and moreover killed one in the act. This fellow burrows in the earth, and it may be that his habits are different from the rest of the tribe. The fact is new to us.

Gophers.—Thomas Bickerton, of Douglass Co., Kansas, is much troubled with gophers, and suggests that the hydrogill, or some similar thing, be used to inject "some inflammable material, with plenty of sulphur" into their burrows. Suppose you subject your idea to a practical test, Mr. B., and publish the result. We have also a suggestion to make. From repeated trial it has been found that wheat prepared as follows, will poison rats, mice, crows, etc.; Dissolve one drachm corrosive sublimate in one pint alcohol, and add one tablespoonful of molasses. Pour this upon four quarts of wheat, and let it stand covered until the wheat has absorbed the decoction, then spread out and dry, when it is ready for use. Why may not gophers be poisoned by corn prepared in the same way?

Seed Wheat.—"A. S. P.," Edinburg, Ohio, has increased the weight of his wheat two pounds in the bushel by selecting the ripest part of the field for seed, and screening for the largest kernels. He approves of soaking in brine and rolling in plaster or quick lime.

Hallett's Pedigree Wheat.—There is no denying the fact that Mr. Hallett is producing extraordinary results in his experiments with wheat. We have seen with our own eyes some of these results, and can bear witness that the large engravings of wheat heads we published last year are even less in size than those we saw and measured the present year. Some complaints have been uttered respecting the money-making account to which Mr. H. is turning his experiments, but he is clearly entitled to good remuneration for the expense of his experiments. He has shown, and is continually strengthening the proof, that as with animals, so with grains, improvements in the yield, and in the size and production of the heads and kernel, can be made to an indefinite degree by selecting extraordinary specimens for propagation. Thus, if one desires to secure short straw, long, well filled heads, etc., he has only to select and propagate each year individual plants strongly marked with the peculiar features it is desired to develop. The kernels from a large head this year will produce one or more larger heads next year. The largest one of the second crop will produce one or more still larger heads the next year, if the soil be very good; and so the improvement may be carried on indefinitely. We advise our more enterprising readers to experiment in this direction, not only with wheat, but with oats, rye, and other grains. A few years will develop an extraordinary product, which may be multiplied at pleasure. In this way may be secured greatly improved seed—to the benefit of the country, and to the pecuniary profit of the patient experimenter.

Indian Hemp Bark for Bands.—A subscriber of the *Agriculturist* who has tried it, recommends this material for tying up tomatoes, etc., to trellises.

Orchard Grass.—"A. K. McC," Chambersburg, Penn. This is a superior pasture grass, especially when mixed with red clover. It should not be sown alone—for it does not make an even sward—except for seed, in which case about two bushels are required to the acre. When sown with clover, one bushel per acre is sufficient, and in either case is best sown early in September. The clover should be sown in March following.

Wintering Cabbage Plants.—"D. C. Johnson." To get extra early cabbages in the Spring, prepare the ground the previous October, choosing a dry, warm spot; set out the plants a foot apart in drills, and get them well established by November. When hard frosts begin, put on a layer of straw or other porous litter across the drills, so as to keep off the winter sun, and to prevent constant freezing and thawing. Early in Spring remove the straw and work the soil. The plants which live will be the earliest in market.

The Royal Cheese Beaten.—"S. S.," of Locust Valley, L.I., says a cheese once sent from New-England to the President of the United States, weighed 3000 pounds, was twelve feet across, and could not be got into the hold of the sloop that conveyed it. If the cheeses were bigger in those days, the sloops certainly were smaller. When and where was it made.

To Prevent Milk Moulding.—H. B. Craig, Franklin Co., Pa. Milk will not mould in clean vessels, in a clean, *well-ventilated* dairy room. It is very apt to do so in warm weather in close, damp rooms, especially if they need whitewashing and are not in every respect perfectly clean and sweet. Soap and water and the scrubbing-brush, with whitewash often applied to walls and ceiling, are an effectual remedy.

Peas and Beans for Hogs.—"E. S.," of Dwight, Ill. These are much more used in the South than with us. The chief advantage of sowing peas is that it saves labor and gives a change of crop and of food.

Good Sheep.—T. T. Griffith, Md., has five sheep that sheared forty pounds of wool, and two lambs that dressed 102 pounds at three months old.

A Horse Pond, made by puddling with clay, should be the last resort for water, even for animals. A cistern under the barn is better. A well is better. Water brought in by a pipe is better. Warm, stagnant water, gathered from the surface, can not be much better for horses than for men. We plead for the poor dumb brutes.

Ingenious Method of Halter-Breaking a Colt.—J. C. M., of Lafayette Co., Wis., communicates the following plan, giving the credit of its invention to John L. Brown of the same county: "Tie a rope around a bay stack, then fetch your colt up to the stack, and tie his halter to the rope; there will be no danger of his hurting himself, or finding an unpleasant customer when he comes up to the scratch and gives in beat."

A New Dish for Stock.—It matters little what the new dish is, only let it *be* something new. Many farmers seem to think it enough to provide fodder sufficient in bulk to last through the winter, regardless of its variety. Every winter shows observing men that domestic animals become cloyed on the best of food, if confined long to one article. It is so with man. He craves a variety, and he must have it if he would continue in good health. Notice how seamen on long voyages are subject to attacks of scurvy or other maladies; and that chiefly because they are confined to nearly the same bill of fare, week after week. Experiments have been tried on dogs and cats and other animals, and it has been found that they sicken, languish and die, if kept an undue period on one kind of food. Obviously, the true course for the farmer is to lay in both enough and a variety of fodder. Hay to succeed stalks, and then roots to vary both, and meal to vary that, and so on. This will carry them safely and pleasantly through the long confinement of winter.

Hoof-Bound Horses.—A subscriber in Pleasant Valley, Pa., asks for a remedy. Dr. Dadd says, "A run at grass, in a soft pasture, the animal having nothing but *tips* on his feet, is the best treatment." Poulticing with soft soap and rye-meal is also recommended. This disease is often caused by paring away too much of the bars which support the heel, in shoeing.

Heavy Calf.—B. R. Prince, of Suffolk Co., L. I., writes to the *Agriculturist* that one of his neighbors, Mr. Henry Duthill, had a calf slaughtered when a few days less than fifteen months old, which weighed 666 lbs. It had never been weaned from the cow, and never drank any water. Breed not stated.

Saw-dust for Bedding.—"Farmer," of Winnebago Co., Wis., writes: "I have used pine saw-dust, and have noticed no bad effect on the hoofs of my animals, but on the contrary it appears to be a benefit. The only question with me is, whether it is a good article for manure. There appears to be a great difference of opinion in relation to the usefulness of pine saw-dust. Some are of the opinion that it is injurious to land on account of the pitch which it contains, while others think it injurious only when used fresh from the mill. Many of us farmers live in close proximity to saw-mills where we can get the dust for nothing, and if we were assured that it is a good article for land when well mixed with manure it would be of great benefit to us."

Taming Fishes.—T. M. F.," Franklin, Ind., writes to the *Agriculturist* that some of the fishes in a pond on his grounds will come to him on hearing his whistle, eat from his hands, and allow him to take them from the water.

New Straw as Manure.—"B. M. F.," Horsham, Pa. The absorbent capability of straw is an addition to its value, provided it can be used—i. e., if you have any liquid or fresh manure to compost it with; it is more easily plowed under, and rots sooner than when used dry. We know of no implement that will turn dry straw under better than the common plow. This is effectual if one follow with a fork to fill the furrow with straw.

Eaves-trough Tile.—"J. S. C.," of Haddonfield, N. J., says he tried them for ten years. With a constant flow of water they are durable.

Saline Incrustrations on the Soil.—One of our subscribers writing from Salt Lake City, Utah, says: We have many valuable tracts of land spoiled by the rising of a whitish efflorescence to the surface, (commonly called saleratus by the people). Can you inform the readers of the *American Agriculturist* in Utah, how to neutralize these alkaline deposits which destroy many crops?" The only remedy we can suggest is deep drainage. Thus in the season of heavy rains we might hope to remove the excess of salts so far that during the dry season (for in Utah the rainy and dry seasons prevail as in the tropics), capillary attraction will not be so likely to bring it up to the surface. Drains should be 4 feet deep and no further apart than is consistent with the most thorough draining of the whole soil.

A Garden Syringe.—"J. A. A.," Saginaw Co., Mich. Any tinner can make a garden syringe—take a copper or tin tube 2 inches in diameter, and solder on a head punctured with moderately fine holes; fit a piston or plunger to it with another head, wind the piston with tow and it is ready for use; if may cost $1.

Iron or Wooden Rollers for Cane Mills.—Mrs. F. G. Dickson, Kankakee Co., Ill. By all means use iron instead of wooden rollers for cane mills. The mills should be very strong, with iron rollers and iron cogs. Iron will not impart color to the juice while it is being crushed out.

Farm Mills.—F. H. Williams, Franklin Co., Mass., and sundry other persons, ask for information as to the practical working of the "People's Mill" formerly advertised in this paper. We know nothing from experience, having only seen it in operation at fairs and where offered on sale. We judge it better adapted for grinding *feed* than making *fine flour* for family use. The grinding plates are of iron and easily and cheaply replaced when worn so as to be ineffective. Shall we hear from some uninterested person who has had this or any other good portable farm mill running satisfactorily for some time?

Sorghum Sugar.—A very good sample of well-grained sugar, made on Cook's Evaporator, was sent to our exhibition-tables by Messrs. Rhymers, Bates & Day, of Mansfield, O. They write that the demand for Evaporators is so large, that though they are working their manufactory to the fullest extent, turning out from 60 to 75 Evaporators per week, they will be unable to fill all their orders this season. We believe Cook's is the only Evaporator which has successfully turned out sugar, in quantity.

Mayhew's Illustrated Horse-Doctor is one of the best recent publications on the treatment of disease in horses. The author has as ready a pencil as pen, and his descriptions are vividly illustrated by himself. The effects of disease are decidedly caricatured, but caricatures, whether of the pen or pencil, often present more correct views of facts than matter-of-fact statements or drawings. It contains 528 pages 8vo, with more than 400 illustrations. Published by J. B. Lippincott & Co., Philadelphia.

Illustrated Strawberry Culturist. Mr. A. S. Fuller, of Brooklyn, has put forth, in connection with his descriptive catalogue of varieties, a very excellent and valuable essay on the strawberry plant, its varieties, propagation, open culture, forced culture, inflorescence, the fruit, picking, marketing, preserving, &c. Sent by mail from this office, on receipt of 10c.

Annual Cyclopædia for 1861.—Appleton & Co., whose *American Cyclopædia* (now complete to SPI, and acknowledged to be admirably full and explicit,) has added so much to their previously high reputation as publishers, are out with a single volume of uniform size, (royal octavo,) with the American Cyclopædia. It is a record for 1861, of the important occurrences, in civil, political, military, and social affairs; containing a description of each important invention, of progress in Agriculture, in Science, in Mechanical industry, a view of financial matters, Biography, Statistics, Commercial matters, Public Documents of importance, and a very full *literary* record for the year. After a somewhat careful examination, we fail to find any omissions of important subjects. Such a volume is to be issued annually. For the present, the condition of our own country and the affairs of Europe give great interest and importance to current history. Published by D. Appleton & Co., No. 443 Broadway, N. Y. 780 pages, large 8vo; price, bound in cloth, $3.

Garden Book.—J. Moore, Sussex Co., Del. Hudson's Home Garden is a good general work, treating slightly on the small fruits. It really is a good, practical, modern hand-book upon the raspberry, one on the blackberry, gooseberry, currant, etc.

Not Right—"Gleason's Literary Companion."—This paper habitually copies from the *American Agriculturist* column after column of laboriously prepared original matter, including the Calendar of Operations, recipes, and the Basket matter, but instead of a fair, honest credit, it puts prominently at the head of the copied matter: "*Gathered for Gleason's Literary Companion.*" It is true that it usually adds to the last paragraph, as obscurely as may be, "*Am. Agriculturist,*" to avoid violation of our copyright. We submit that it is not doing the square thing. Mr. Gleason has long acknowledged that he finds the best matter in the *American Agriculturist*. If worth copying, why not give full and explicit credit? *Our* articles cost us brains and money. Please admit their origin plainly, or let them alone. A few other journals may well heed this, though sinning less than the one specially referred to.

Excellent Teeth.—Few people are aware how much good teeth, and their proper use, have to do with *health*. Food must be rapidly *dissolved* in the stomach, or it will not nourish and strengthen the body, but will, on the contrary, produce irritation, indigestion, and ill-health generally. The mashing and grinding *must* be done by the teeth, or the dissolving can not be well done in the stomach. A single sore tooth may prevent good mastication, and the unmasticated food produce indigestion, to be followed by debility, sickness, and ultimately bring one to an untimely grave. We are talking of facts, and not uttering fanciful theories. We therefore look upon dentists not merely as the promoters of the good "looks" of people, but as direct contributors to health and enjoyment. The little "plug" in a decaying tooth often not only saves the tooth to adorn the owner's mouth, but at the same time promote his health.—Those who have lost their teeth through their own bad habits, or from inherited defects, have much to thank the dentists for. Recent improvements have put it in the power of most persons to obtain complete or partial sets of teeth, equaling in beauty, and *almost* equaling in effectiveness the best natural teeth. Of all the modern improvements we think the invention of Dr. John Allen, formerly of Cincinnati, but now at 22 Bond-street, New-York, comes nearest to perfection. We took occasion to compare a full set of his manufacture with the best at the World's Fair in London, and with the best displayed in the dental establishments in London and Paris, and found nothing anywhere near equalling with them. By means of molds he beats a thin plate of *platinum* (the most infusible and incorrosive of metals) to fit the mouth exactly. To this plate is attached teeth every way natural in appearance (not so white or glistening as to appear artificial). A silicious paste, colored to the shading of the gums and roof of the mouth, is then laid upon the metal plate, and the upper part of the teeth. The whole is then melted in a powerful furnace to form a single mass which fits and adheres to the roof of the mouth so perfectly as to leave not the least appearance of artificial work. Even the natural corrugations and coloring of the roof of the mouth and of the gums is imitated. We have been intimately acquainted for months with persons having these artificial teeth, without suspecting the presence of other than natural teeth.

Baker's Glass Fruit Jars.—For simplicity, and yet effectiveness, these seem to be among the best, if not *the* best jars now offered to the public. They are simple and cheap—two important considerations. We have a number of them filled with strawberries and other early fruits, and they are doing well. The fruit being poured in, they are closed in a few seconds, by simply laying on a light fitting cover and putting on a clamp that with half a turn compresses the rubber ring, and closes the cap effectually. Manufactured by Potter & Bodine. See advertisement for particulars.

Pumpkin Pie.—The season for this luxury of Yankee land is come again, and so we must correct a recipe published on page 182, (June *Agriculturist,*) for making pumpkin pie out of turnips. Instead of 2 quarts of milk, use 1 quart, with the two peeled, boiled, and mashed turnips, 1 lb. brown sugar, 4 eggs, ½ cupful of molasses, ½ cupful of wheat flour, 1 spoonful ginger, and 1 nutmeg, seasoned and baked as a pumpkin pie should be.

Sowing Oats with Winter Wheat.—Geo T Roberts, Sussex Co., N. J. We consider it impolitic to sow oats with wheat if the wheat is sowed early enough to get well rooted before the ground freezes up, say before the middle of September. If sowed later, and sowed broadcast, mix the grain but sow on a still day. If the day be windy sow each kind of grain separately, using no more oats than you do wheat by measure. We have heard stated that very late sown wheat may be *drilled* in after oats are sown broadcast and bushed or harrowed in, and that it will thus do very well. The object of sowing the oats is simply to provide a mulch for the wheat during Winter, where it is liable to winter-kill.

Laying out Grounds.—"A. T.," Ky. Any work on landscape gardening will furnish the needed hints. Sargent's edition of Downing's Landscape Gardening is probably the best for an amateur. It is now out of print, but copies are often found in book stores.

Sewing-Machines at the World's Fair.—The machines which bore off prizes were Wheeler & Wilson's, Howe's, and two French machines, all in the same category. Wilcox & Gibbs', I. M. Singer & Co.'s, and several foreign machines, received honorable mention.

Good for Pennsylvania!—Canada thistles. We learn from our exchanges that the Legislature of Pennsylvania have made it a criminal offense for any one to allow Canada thistles to go to seed on his farm, and a fine of $10 is imposed upon each established complaint—and besides, after five days' notice, any one may enter another man's grounds, cut up the thistles, and recover full costs.

Raising Trees, Seeds, etc.

Nurserymen and private persons even, have hercofore been large importers of fruit and ornamental trees, roses, etc., most of which were obtained in France and England. Seeds too, and flowering bulbs have been brought in immense quantities principally from England and Germany, as also seed wheat from the shores of the Black and Mediterranean seas. Without discussing the policy of levying a heavy tax upon these importations, we will now only remark that the recently enacted laws laying a tax of 30 per cent. advalorem upon them will necessarily stimulate the home production. It can not be considered a lack of patriotism to advise early preparations to supply our markets with home grown articles. At this season should the seeds and pits of fruit trees be saved, as well as seeds of many of the forest trees, especially the evergreens, which should be collected and treated so as to secure the best results when planted. Farmers ought to save a larger amount of the best grain, corn, and vegetables, than usual, and take additional pains with the ripening seeds of those vegetables set out in the Spring. For several years past seeds have been so cheap that many farmers have preferred to buy rather than raise their own. This will no longer be the case—at least for some kinds. The lover of flowers also should see that seeds of the finest sorts are saved for another season. The wide-awake nurseryman will scarcely need the hint, but will at once make arrangements to raise his own pear, quince, plum and cherry and other stocks, most of which have hercofore been imported.

Laborers Wanted—Hint to Canadians.

There has recently been a large exodus of laboring men to the British Provinces, and we learn that in some parts of the Canadas there is an excess of this class, seeking employment on any terms. In the Northern States, on the contrary, there is likely to be a deficiency of efficient help, during a few months. The inducements to enlist directly, or as substitutes for those who cannot well leave their business, are now very large. The bounty for substitutes for nine months, will probably range from 6 to 12, *or more* dollars per month, *in addition* to the Government pay of $13 a month, and all expenses. This will be liberal pay considering that the liability to actual danger will be very small. Probably few of the nine-months men will be actually called into the battle-field, and if they were all so called, a man's chance, among 300,000, of being hurt, would be a pretty remote one. Even supposing that 10,000 out of 300,000 were killed or wounded, a man would even then have 299 chances of escape to 1 chance of being injured, which is about as good a chance as he would have if employed on the water, or on railroads, or among machinery, in peaceful pursuits. We take it, therefore, that if the draft be actually made, there will be a large number who will gladly accept of the chance to go as substitutes at $18 to $25 a month (including bounty,) among the reserve nine-months men, rather than to accept $10 or $12 a month at farm labor.

The hint we would offer, is, that men in the British Provinces will doubtless find it to their interest to come on and occupy the vacant places on our farms. We do not invite them here to enter the army, unless they *choose* to come for the pay offered, for there are citizens enough here to meet all demands. It will be well, however, for all who thus come seeking employment, to bring along some certificate of actual Canadian citizenship, for there is a generally-settled purpose not to empty those men who have "skedaddled" to escape military service. Persons seeking employment here should, therefore, be able to show that they do not belong to the class of returned runaways. If actual citizens of other countries, of good character, they will be welcome to the vacant places on our farms.

Agriculturist Crop Reports.

Breadth, Condition, and Prospects of the Principal Crops, Reliable Reports Gathered from the Whole Country.

On pages 282 and 283 will be found further condensed and very valuable reports on the state of the crops throughout the whole country. Excepting for two or three crops, the reports are, on the whole, very favorable. The following summary will be useful to those who have not the time and patience to examine the reports in detail.

THE WEATHER.—*A.* The average for the whole country, for the month ending August 10, is **10.6**—(10 representing the average for five years past.) The best weather is reported from the States of Minnesota (13½.), Missouri (13.), Wisconsin (10½.), Michigan (10¼.), Ohio (11½.), New-York (11.), and New-England (10.). In Indiana (9½.), and Illinois (9½.)

WINTER WHEAT.—*B.* The area as compared with last year is, for the whole country as **11.8** to **10.** This average prevails in almost all sections. In Wisconsin the area is 16¼, against 10 last year. In Ohio, 11½. In Illinois, 11.4. In Michigan, 13½.——*C*—The surface as compared with the average for five years past is, for the whole country, 13½, or one-third increase.—*D*—The prospective yield for the whole country averages **12.6**, that is fully *one-fourth* better than the average of other years! In the great wheat growing State of Ohio, the prospect averages over 16; in Indiana, 13½; in Wisconsin, 13. As these reports come from judicious observers, they indicate unmistakably that, for the whole country, with the increased surface (13½), and the excellent prospects (12.6), the crop of Winter Wheat is this year largely in excess of an average one. Here are the reports of the prospective yield per acre as they range by States: Ohio, 16.12; Indiana, 12.52; Illinois, 10.1; Iowa, 10.5; Missouri, 11.5; Nebraska, 8; Minnesota, 16.66; Wisconsin, 12; Michigan, 8.33; New-York, 11.15; Pennsylvania, 12.8; New-Jersey, 15; New-England, 9.2.——Extensive ravages by the "Chinch Bug," are reported in Dane and La Fayette Counties, Wisconsin; and also in Delaware, Cedar, Lucas, Linn and Madison Counties, Iowa.——The midge is reported as destructive in Orleans and Chautauqua Counties, New-York.

SPRING WHEAT.—*E.* The average area for the whole country as compared with last year, is reported at **12.4**, or about one-fourth more. In Illinois, where much Spring Wheat is usually grown, the area as compared with last year is estimated at 7.6, or about one-fourth less. In Iowa, it is 10.9.——*F*—The area of Spring Wheat this year, as compared with the average for five years past, is 17.8, or 78 per cent above the usual surface. In Illinois, this falls to 7, while in Iowa it rises to 25.—— *G*—The prospective yield per acre is, for the whole country, 9, or one-tenth below the average. Illinois and Iowa report only a ¾ average yield per acre; Michigan only ½ yield. The yield per acre, of Spring Wheat, will evidently be poor in those regions where this crop is most grown. The greater area will hardly make up the deficiency.

INDIAN CORN.—*H.* The average surface for the whole country is reported as slightly above that of last year. In the great corn State of Illinois, the area is put 9 per cent below last year.——*I*—As compared with the past five years, the area is this year put at 12.2 for the whole country. In Illinois it is 9¼, and in Iowa 20.8.——*K*—The *Prospects* of the corn crop to August 10, are reported good, the average for the whole country being 10.2. Illinois stands at 10, or just an average. This, with a deficiency of 9 per cent in area, indicates a smaller crop than last year. Taking the whole of the great western corn-growing regions together, the increase of area, and the average good prospects, indicate about the same crop as last year. An early or late frost will, however, materially change the final yield.

RYE—Column *L*, the area, and *M*, the prospects, indicate a yield about five per cent above the average, taking the whole country together.

OATS.—Column *N* represents the area, for the whole country, as being 12 per cent above the average; and *O*, the prospective yield per acre, as 8 per cent below; or less than average crop, on the whole. A considerable number of reports, especially from N. Y. and Penn., speak of much harm from the "Aphis," or "yellow insect." At the West, "rust" is complained of.

HAY.—Columns *P* and *R*, indicate the area, and the yield per acre, to be about 15 per cent above the average. In New-York State, the yield per acre is 9 per cent below the average.

POTATOES.—Columns *S* and *T*. For the whole country the area and prospects, range above the average.

FRUIT.—*Apples* (*U*) are very good in many States, the average prospect for the whole country being about 70 per cent above average years. ——*Peaches* (*V*) are reported very good, or, for the whole country 2½ times the average crop. The great apple growing regions report from a double to a triple crop, and few places anywhere report less than a double one.

SORGHUM.—Many reports from Ohio, Indiana, Illinois, and Iowa, represent a very large area. The prospects, in different localities differ materially, ranging from poor to double.

BARLEY.—Thirty-five reports represent a larger area in most States except Ohio, and good prospects except in Licking Co., Ohio, Howard Co., Iowa, and Chenango and Otsego Co.'s N. Y.

GENERAL SUMMARY.

A careful examination and comparison of the many hundreds of reports from all parts of the country, indicate that, taken as a whole, the present year has been unusually favorable to our great agricultural interests. There are local exceptions, in various sections, some of which are noted above, but these are not extensive enough to affect the general result.

The Foreign Harvests.

As we are now reasonably sure of a large surplus of breadstuffs in this country, an important question is, whether our surplus will find a foreign market, and on this subject we can speak with some degree of assurance. The Editor of the *American Agriculturist* has just returned from a trip through Great Britain, France, parts of Germany and Belgium, and reports:

"I found the wheat harvest in progress on the Continent. From what I saw, and from the statements of many farmers, I judge the yield to be below the average. The large area will in part make up the deficiency, but not wholly. In Great Britain the weather continued very wet up to the 24th of July, when a change occurred, and from that up to the 4th of August, the wheat crop continued to improve rapidly. But at the best, the damage to the growth by the wet weather all through the early Summer, can not be repaired. It is morally certain, therefore, that Great Britain will require a considerable amount of breadstuffs from abroad. Much of this could probably be obtained from the Continent at some figure, but not at the prices for which it can be furnished by the United States. My present opinion is, that our own surplus grain (unless unprecedentedly large) will mostly be taken at prices which will yield a fair remuneration to American farmers; but that *very* high prices can hardly be looked for. The present premium on gold is decidedly advantageous to the American grain markets. A gold "sovereign," counts at about $5 50 in the purchase of grain in America; in Russia, and Central Europe, it counts only as $4 75 or $4 80."

Home Again.

Unexpectedly, the writer has returned just in time to report himself in the closing editorial column of this paper.—After devoting some weeks to Great Britain, at the Royal Agricultural and Horticultural Shows, etc., we started on a tour through France, Switzerland, Germany and Belgium, intending to study the agriculture, and agricultural Schools of those countries. We had proceeded as far as Lyons, the great silk-growing region of France, when news came (by the way of *London*, of course,) that the principal army of our country was annihilated, that 75,000 men were *hors du combat*, and that the remnant of the army was about to surrender unconditionally. With such disastrous news, false indeed as it proved, but told as truth, our future journey lost its interest, and we immediately wrote to Liverpool and secured a passage to America in the first rapid steamer available. We felt it a duty to hurry home, if not to go into the army personally, at least to fill the place of some one who could do efficient service, to be ready to encourage our own brothers in the field, and to do all we could to promote the cultivation and profitable marketing of the greatest possible amount of the products of the soil, for the feeding our armies, and for sustaining our government.—But as hurried as was our journey abroad, by the diligent use of the time, and with unusual good health during every day's absence, we were able to see and learn much that will, we trust, be of future use to our readers. We have no intention of writing out a connected journal of our travels, but will drop a hint here and there, from time to time, as may seem desirable. O. J.

Our Country.

"Every Man to his Post!"

If one thing more than another would make us earnest in our efforts to preserve our country entire, it is the desire of the aristocracy of the Old World, everywhere manifested—and especially so in England—to see this great Republic of ours split up into fractions, with jarring interests and a prospect of unending strifes. Better that we make any required sacrifice of life and substance now, however great, than that our National Unity be dissolved, and war and discord be our perpetual heritage. We have recently stood upon some of the battle-fields of Europe, where the very soil is still fertile with the blood of hundreds of thousands of men—men slain in the wars concerning imaginary lines where Nature has made none. *Our* country has no natural dividing lines. Let us be forewarned against all attempts to set up artificial ones. Let every true American, native or foreign born, spare no effort now to preserve our country intact. It is even "sweet to die for one's country." Let "*Dulce est pro patria mori*" be the watchword of every man who would value a patriot's grave above an ignoble life in a country rent to pieces by traitorous hands.

FAT SOUTH-DOWN SHEEP.

Engraved for the American Agriculturist.

Whoever gives this picture the most casual glance, if he is at all familiar with the breed, will recognize the well-bred South-down; it requires no name under the cut. The straight, broad backs, broad loins, long, full quarters, fine heads, deep chests, the carcass round and well filled out back of the shoulders, the short, fine limbs, close fleeces, and the breadth of chest indicated by the distance apart of the fore-feet, all show this peerless breed of mutton sheep. Why is it that our animal portrait painters in this country, at least those whose pictures are engraved, so seldom succeed in giving any natural air and life to their productions? Perhaps the best talent is not often enough engaged. Portraits like the above, which might almost be called *bleating* likenesses, would be invaluable to a flock-owner who wanted to secure for his flock the notice and appreciation of the public. The sheep, and particularly the mutton sheep, occupies a place in economical husbandry, which can not be dispensed with, or supplied by any other animal. It is a great fault in American farming that over great districts sheep are so thoroughly ignored. They are an almost essential element in high farming; with their introduction, root crops to be fed on the farm; clover-lays fed off, and the sod, enriched by the droppings, turned under for wheat, the improvement and clearing up of wild and brush-grown pastures; tidy fences, and other evidences of good farming, follow almost as a necessity. We say, therefore, keep sheep, and if mutton is an object, keep South-downs.

For the American Agriculturist.

Cost of Harvesting Hay.

I had occasion to hire a meadow of nine acres the present season, and the notes from my field-book show the cost of the hay and of the harvesting, and also throw some light upon the profits of farming.

The rent of the Land was	$20.00
Cutting grass with horse-mower	6.50
Raking four hours with horse-rake	1.00
Curing and stacking seven tuns	7.50
	$35.00

This shows the cost of the hay in stack to be five dollars a tun. As it is worth fifteen, there is a profit of seventy dollars on the nine acres. But it is poor farming where grass yields under a tun to the acre, as in this case. Had the land yielded two tuns to the acre it would have cost no more to mow it and to rake it. The only additional expense would have been in gathering, which would not have exceeded a dollar a tun. From accounts kept several years, I have never been able to gather hay with the scythe and hand rake for less than three dollars a tun. The expense in this is but a trifle over two dollars a tun. The farmer who owns his horse mower and rake, I have no doubt can gather his hay for a dollar and-a-half a tun. What an infinite relief the horse mowers and reapers are to human muscles. It is cheering to see them appearing in new fields every year. CONNECTICUT.

The Fall Fairs and Cattle Shows.

These are likely to be held in undiminished numbers this season. Two years ago the cattle disease prevented the holding of many of these fairs, and last year the alarms of war either postponed them, or occasioned a thin attendance. But this year, notwithstanding the disturbed state of the country, and the multitudes that have joined the army, the usual number of fairs in the loyal States is likely to be held, judging from the premium lists and the announcements we have seen. This is as it should be. There is no good reason why the fairs should not be opened with their usual attractions. Our crop reports, embracing all the loyal States, show very conclusively that a larger breadth has been planted than in any former year, and perhaps we are justified in saying, that not an acre the less has been planted on account of the war. The demand for our breadstuffs in Europe, as well as the war, has stimulated production. Some probably have been influenced by the tradition that "high prices rule in war." Horses and machines have so far taken the place of human muscles in the field, that we miss the labor taken by the army far less than we should have done ten years ago.

Farm crops, on the whole, were never better, and the materials for a fine show are abundant on every hand. It is conceded that the wheat crop is a good deal better than the average; hay, with rare exceptions, is good, and grass abundant, which ought to put cattle in good condition. Fruit is plenty, which should make the horticultural department of the fairs unusually good. Manufactures in some branches are depressed, but there is the material for a good show in almost every county. Fairs which once might have been advocated as a farmer's holiday, have now become a necessity. They give a few days of recreation after the pressing labors of the Summer are over, and for this purpose they are worth all they cost. It does men of a common pursuit good to get together and have a celebration. It begets enthusiasm, and lightens the burdens of toil. But fairs are no longer mere holidays. They are schools of instruction, and no farmer can afford to stay away from them, and lose their benefits. He can hardly fail to learn something that will make his capital and labor more available for the next year. Here all the improved seeds, and tools for lightening the labors of the husbandman, are on exhibition. Here are the model animals that will turn the vegetable products of his farm into the most animal products for sale. So long as one cow will make more milk, butter, and cheese, from the same pasture than another, it will be a matter of great importance to visit cattle shows, and study the models. These fairs have already done a great work for the farming interests of the country, and, we doubt not, are destined to do a still greater. The shrewdest and most successful farmers are the steady patrons of these institutions, always present in person as careful observers, and sending in samples of their stock and crops.

The shows should lose nothing of their interest in a time of war. The ability of the country to sustain its burdens, will depend very much upon the prosperity of our agriculture. With our granaries full of wheat and corn, and our fields covered with flocks and herds, we shall be able to continue this war for years to come, if it be necessary. Let us go up to the fairs then in full force, old and young, and take with us the best samples of our handiwork—the products of the field, garden, and orchard, and the best specimens of our flocks and herds. There is pleasure and profit at the fair.

Hogs on Dung Hills.

The practice of keeping swine in a pen or small yard containing the manure etc. thrown out from the barn, is not to be commended. The hogs may find some fodder among the refuse hay and straw; they may improve the heap by turning it over and mixing their own ordure with the same; but we question whether it is a good thing for the swine. They become dirty and scabby, and sometimes lose essentially in vigor and health. Perhaps the injury comes partly from the heat and the gases constantly inhaled from the fermenting manure.

It is much better, we think, to keep hogs in quarters by themselves, and as clean and sweet as possible. Give them dry and commodious pens, with plenty of clean straw in their beds.

When to Sell a Colt.

A farmer makes quite as much money by selling at the right time as by cheapness in production. Stock as well as crops are kept too long for the greatest profit. A bushel of potatoes sold in July frequently brings a dollar; in September, forty cents, though the cost of production is the same. A lamb sold in time for three dollars, often brings more net profit than the fat wether sold at two years old. A pig will frequently bring four dollars at eight weeks old. At eight months well fattened, he will only bring twenty dollars, after eating twenty dollars' worth of provender. With this result it is easy to see the time to sell pigs in some sections.

It is not so easy to know when to dispose of a young horse. As a colt he may sell at weaning time, say four months old, for twenty dollars, or fifty, if a handsome animal. It has not cost much to raise him, for he has lived on his mother's milk, and she has paid her way by her work. But when he is put up for the winter, his keeping begins to count. He can do nothing in the way of self support until three years old, and it were better perhaps not to work him much even then. If well kept he can not cost much less than a hundred dollars before he is fit to work, in any region where hay is worth fifteen dollars a ton. He may sell for three hundred dollars or more, but the chances are that he will sell for no more than the cost of his keeping. The farmer may not lose any thing, but he will only have made a fair market for his hay and pasture. In the sale of a colt during his first Summer or Fall, the price is nearly all profit. There is little risk about it, and the venture is made a certainty. If the sire be a blooded animal, the colt will generally sell for enough more to pay for the price of his services, and often to pay for them many times over. It is most in keeping with our calling to make the profits sure, though small.

Cattle-Comforts.

MR. EDITOR:—I hear and read a great deal about having good horses, fat cattle, and the like: also, a good deal about feeding them on this or that, but I don't hear much about trying to make our stock comfortable and positively happy. I want *my* cattle and horses not only to live, but to enjoy life as they go along, just as their master does. A really good-hearted man will take pains to please and gratify his domestic animals: he will strive to attach them to his person, so that they will know his voice and step, and always be glad to see him. Do you get my idea?

Well, this is the way I work it: In cold weather, I see to it that my cattle have wholesome food, and as much of it as they will eat up clean. I see to it that they have a variety, also—hay of various kinds, oat-straw, corn-stalks, roots and grain, cooked and uncooked. Milch cows, fatting cattle and working cattle, all thrive best and keep happy on a variety.

Of course, I don't neglect giving them comfortable quarters, whenever they need shelter. Come out here, Sir, and see my stalls and my sheds, and my dry, well-littered yards, if you doubt. Experience shows me—and I know you teach the same doctrine—that stock will eat about twice as much fodder, if they are kept out in the wind, and pinched with the cold. But, letting go the dollars and cents, I want to see my family, rational and irrational, happy. So I go in for good quarters. In addition to this, temperance man as I am, I believe in good drinks for my stock. I won't compel them to wade a half mile through mud and snow to a stream of water, but I have got up a penstock in a clean corner of the yard, which pours into a large tub, and the overflow goes into a long trough, so that quite a number of cattle can drink at once. My cattle are salted once a week regularly the year round. Some people keep it afore them all the time; and some cattle never see it.

But this in the general. Besides this, I go out of my way often to please my friends at the barns. In the Summer, I seldom go into the pasture without taking along an ear or two of corn, or a handful of oats, to give to the first horse or cow I meet: and I'm sure to meet some creature in double quick. They flock around me as soon as I come into their domain. And when I go out to the barn to harness a horse or to yoke up the cattle, I take into the stall a sweet apple, or something else that will please the poor creatures. I speak pleasantly to them, and caress and fondle them. Be sure I do. In this way, they become gentle and kind, and are plainly much attached to me. None but a fool or a hard-hearted man will doubt that they are made happy by such treatment. Now, when I deal so with my horses and oxen, they will do for me whatever service I ask. When they are at work, I give them to understand that they must mind, and they always do. But I never over-work them. I have lived long enough to know what a fair load is, and I never mean to tax them beyond their strength, nor work them for too long a time. In this way, they learn to confide in me; they never revolt, but work cheerfully.

A COMFORT-LOVING FARMER.

Tim Bunker on Swamps Turning Indian.

"So you see it's turnin' Injun agin," said Deacon Little, as he looked into the horse-pond lot where I was mowing with the machine.

"I guess you did'nt make so much eout of me in that bargain as you tho't for, Squire Bunker," said Jake Frink, as he joined the Deacon at the fence a few days ago.

"What evidence of Indian do you see in this grass?" I inquired.

"Plenty on't," answered the Deacon. "There's dock, and rushes, and brakes—I told you so. I never knew it to fail. A reclaimed swamp allers turns Injun arter a year or two."

"And you hain't got morc'n half the grass you had last year," chimed in Jake Frink. "Neow Squire, I du say, if you're sick of your bargain, I'll take that lot back agin at jest half the price you gin me—and that is mighty fair."

"How much hay will I get here to the acre think you?" I inquired of Jake.

"Wall neow, naber, it'll be tight squeezin' to git a ton and a half, and the first crop was three tun three year ago."

"And that tun and a half," I replied, "will be worth $35. Taking out $5 for cost of harvesting, and four more for interest of land and cost of manure, it leaves $18, or the intcrest on $300 an acre. Should I be a wise one to sell it for $10 an acre?"

"But see them rushes and brakes, Squire Bunker," exclaimed the Deacon, "You see the Almighty made that a swamp, and I guess you won't make any thing else eout on't if you keep tryin' from neow till doomsday."

"Well, Deacon, you see nothing else grew here but such things, and sour grasses, four years ago, and since I put in the drains, and stocked it down, we have had less of them every year. There is a hundred pounds of good hay where there is one pound of such stuff. You can not expect sile that is full of old brake roots, and rushes, to say nothing of foul seed, never to show a sign of the old vegetation."

"Nothin' will come of it. You never can make upland where the Almighty has made a swamp."

"That's so," responded Jake. "Better take $10 an acre, and trade back. It will be all moss another year—see if it ain't."

This talk of a July morning shows pretty well the prejudices of some of my neighbors against draining. They want to find an excuse for doing nothing, and thus set up a standard for reclaimed land, that they would not think of applying to land that needs no draining. If it shows any remains of the old grasses, and rushes, it is of course going back again to swamp. If it don't contiuue to bear three tuns of hay to the acre, they hail you with, "I knew it would be so; the land is running out."

Now I hold, that we ought not to expect any more of reclaimed land than we do of any good upland. If it performs as well as that, it is clear enough that draining pays. No upland that I have ever cultivated will keep up a yield of two or three tuns to the acre, without manure. It is very good land that yields a tun and a half three years after laying down. I never expected the horse pond lot to do any better, but it has disappointed me in this respect, and has held out better without manure than any undrained land upon the farm. I should have given it a top-dressing last year, if I had not wanted to see how it would hold out. The yield was quite two tuns, though Jake Frink saw a quarter less. With manure I can get three tuns easier than I can get two upon upland.

The rushes and sour stuff that Deacon Little makes such a fuss about, grow smaller every year, and will soon disappear entirely. There is, however, a need of one more drain in this lot, to make perfect work, and that I calculated on when I began the job. I did not carc to be at the expense of puttiug it down unless it was necessary. It was just fifty feet betwecn the last two drains I laid down, and I can see now that it needs another just half way between. It has always been too wet along this middle line, the grass has not been so heavy, and it is here that the brakes and rushcs are found principally. It is as clean as ciphering can make it, that there ought to be another drain there. Indeed, I have lost considerable money by waiting so long, say half a tun of hay annually for three years. But what I have lost in money I have gained in knowledge. It is worth something to know just when and where to drain. For such land as this twenty-five feet is none too near, and three feet is none too deep. I would drain three inches deeper if I could get the fall. But three feet makes very good work, and land so drained I am sure will never turn Indian.

I never was fool enough to suppose that such land would keep up to three tuns to the acre without manure of some kind. But some men demand this, and because drained swales and swamps will not take care of themselves, they think draining a failure. This is unreasonable. Parson Spooner preached a few Sundays ago about "not muzzling the ox that treads out the corn," applying it, among other things, to giving a good bounty to the soldiers. You see, Hookertown took the hint next town meeting-day, and voted $100 to every man that would enlist. I thought the truth would apply to the sile, as well as to soldiers, and oxen. It is about the best worker man has got, and we have no

business to starve it. I suppose I ought to have been thinking of something else on Sunday, but the application hit my case so exactly, that I made up my mind right off that I wouldn't muzzle the horse-pond lot any longer. It got a dose of manure right away after mowing, without fail. The grass looks as green as a leek now, as much as to say, "Thank you, Squire Bunker, for your kind attentions."

But Mrs. Bunker's mind took another tack, thinking, I suppose, how the bounty was going to help enlistments, and that the new soldiers would help John down on the James river; she thought it wan't worth while to have Parson Spooner muzzled after such a sermon, and hinted that I had better leave a barrel of potatoes and a hind quarter of lamb at the parsonage next day. Well, you see, that was a scriptural application of the doctrine, and as I believe in facing the music, I left them, and added a bag of corn on my account, and a beef ham, that he might know that the oxen and corn part of his text at least was remembered.

But to return to the subject, as Mr. Spooner sometimes says in the pulpit, I think we make a great mistake in not top-dressing our meadows oftener, say as often as once in two years. In a small lot of an acre and a quarter, where I cut four tuns last year, I only cut three this, and the only difference was in manure. Five dollars worth of compost would have made a difference of at least one tun of hay.

Deacon Little and Jake Frink are mighty afraid of having too large grass. Jake often says that he had rather have "two tun than three to the acre." Now I don't believe this notion, that heavy grass makes less nutritious fodder than light. A beef steak out of a corn-fed ox is enough-sight better than one out of a thin grass-fed animal. Why should not grass from a well-fed soil be more nourishing. I have watched this thing at the manger pretty close, and have grown three tuns and a half to an acre, and I have never yet got hay so big that the cattle would not eat it up clean. Cut your heavy grass a little earlier, and cure it well, and there is no trouble about making good fodder. A well drained, corn-fed sile never turns Indian, Jake Frink to the contrary notwithstanding.

Hookertown, Aug. 15th, 1862. } Yours to command, TIMOTHY BUNKER, Esq.

For the American Agriculturist.

Experiments with Concentrated Manures on Grass.

MR. EDITOR:—Will these manures pay? This is the question. To test it I measured off four-rod plots on a piece of old meadow that had been hard cropped for years without manure. It had produced in past years not over three fourths of a tun of hay to the acre. The plots ran from the road off toward the middle of the meadow, and were intended to be as near alike as possible, though the result shows that plot 1, next to the road, was a little above the average. The manures were sown on the 17th of May, broadcast, without any composting, as in the following table:

No.	*Quanty.*	*Value.*	*Weight of hay.*	*Value of hay at $15 p. t'n*	*In- creased.*
1—Nothing.....	..	..	62 lbs.	.46	.. lbs.
2—Peruvian Guano	17 lbs.	.50	108 lbs.	.77	54 lbs.
3—Fish Guano.....	40 lbs.	.59	73 lbs.	.54	33 lbs.
4—Lloyd's Sup'phos	21 lbs.	.59	49 lbs.	.36	.. lbs.
5—Mallp'ed Guano	21 lbs.	.59	92 lbs.	.69	45 lbs.

It will be seen that the weight of hay on No. 4 is less than that on No. 1, which is pretty convincing proof that No. 1 being next to the wall was more than an average. The superphosphate of lime, though a brand of high reputation, produced no effect whatever. I have therefore assumed 49 pounds as the average yield of the plots without any manure. The yield is the best in the case of the Peruvian guano, and the manipulated and fish guanos stand next in order. In no case does the manure pay the first year, if the value of hay is reckoned at fifteen dollars a tun.

The failure to make these fertilizers pay the first season I attribute to two causes, the lateness of the application, May 17th, and the lack of absorbents. In experiments made several years ago the guano and superphosphate of lime were mixed with charcoal cinders, and applied April 4th during a rain. But in this case no absorbents were mixed with the fertilizers beforehand, and no rain fell for ten days after the application. Probably some of the ammonia was lost, and doubtless some of the strength of the manure will appear in the aftermath, and in the grass next year. In the use of the fertilizers with absorbents, and in an early application, there was shown to be a clear profit above the cost the first year. The experiment goes to establish the following positions:

That concentrated fertilizers should have absorbents mixed with them before application. That they should be applied early in the season as a top-dressing for grass. That it is still a doubtful matter whether they can be made to pay the first season they are applied.

JONATHAN.

Two Strings to the Bow.

It is the practice of large farmers, in some parts of the country, to devote their entire energies, and the resources of the farm, to only one or two crops annually. At the extreme South, it is cotton or sugar; in other States it is corn or tobacco. At the West, it is often wheat or corn; and at the East, in some districts, it is hops. In Ireland, the potato crop is the main reliance of the hungry population; and when that fails, famine stares them in the face. England relies so much on her grain crop, that a failure of it begets a panic.

This plan works well, at home and abroad, *provided* the season is entirely favorable to the particular crop. But untimely frosts will come, notwithstanding our plans and expectations; insects will revel in the immense fields, however valuable in prospect to their owner; unseasonable rains will fall; rust and worms, and manifold other evils will beset us on every side. And when the calamity comes, it is a great one. We have intrusted our fortunes all to the keeping of one frail boat, and when that goes down, all our hopes are wrecked. Who does not see that in this course of farming one is incurring too great a risk? It is like investing one's whole fortune in a single kind of railroad stock, and that very unreliable. It is a sounder policy to distribute one's chances over a wider surface. It is far safer to raise three or more different crops; then, if one or more fail, there is yet something to fall back upon. It is very true, that this does not make so great a show for an ambitious farmer. The proceeds do not come in all at once, in so large amounts, as when a single great crop is gathered and sold. But in the long run, the proceeds are larger, as they certainly are surer. It is better to have five years of moderate and regular profits, than one year of large gains followed by four years of losses. Better, so far as the mere money results are concerned; better for one's habitual peace of mind, and better for one's morals.

When the mania for any kind of speculation prevails in the land, a few large fortunes are made, but many men are ruined. Money become suddenly rich, and then as suddenly poor. Sagacious and observing financiers tell us that the most successful and sure way to amass property is to avoid all unnecessary risks, and to be satisfied with steady and small gains. Apply this to agriculture. Well has one written: "A farm which depends for its profit on butter, fruit, cheese, timber, cattle, hogs, corn, wheat, potatoes, flax, etc., makes, perhaps, but a little on each crop; but the rains which come in *drops* are useful, while those which come in *torrents*, and raise freshets, leave great mischief behind."

Reclaiming Salt Marshes—The Object to be Gained, and How to Do it.

The reclaiming of salt marshes is every year attracting more attention among our shore farmers, and the work is so simple, and the results so lasting and valuable, that nothing is wanting but a knowledge of the details of this business, to lead to the reclaiming of thousands of acres of now worthless lands. The impracticability of growing upland grasses upon them rests upon the fact that the tide rises and falls, in the streams and creeks that pass through them, every twelve hours. The hight of the tide varies considerably, not only at different phases of the moon, (the full tides coming with every full moon) but in different localities. Thus the average tide at Throggs Neck, L. I., is some two feet higher than at Watch Hill, at the East end of Long Island Sound. The difference between high and low water increases as you go westward, along the shores of this Sound. Of course marshes at the west end admit of a greater fall of water, and can be drained deeper than at the east end. But as the difference is three or four feet between high and low water in the least favored spot, there is no lack of fall that will prevent drainage in any salt marsh.

Most of these marshes are actually above the tide four fifths of the time. It is only in heavy easterly gales, and at the full moons, that the water covers them. The full sea at other times will not even make the ditches bankfull. The object to be gained by an embankment and tide-gate is, to shut off the access of the salt water altogether, or at least to confine it to the creek and ditches that may be made for the purpose of drainage. Simple as the idea of a tide-gate is, we have rarely found a person who had any idea of the mode of their operation, if he had not seen one at work. Twice every day the salt marsh is flooded and again drained, by the action of the tides. Were the tide to be shut out, fresh water would accumulate more or less within the dike. In heavy freshets there might be a very considerable accumulation of water, but it would be fresh, and might stand for hours, or days even, upon the land without damage. If a dike or dam be built high enough, tight enough, and strong enough to shut out and keep out the sea, and only a single sluice or flume be left through which the water can flow, and this flume be so constructed that by the action of the water a gate will close it the moment the water tends to flow in, while when there is no pressure on the outside the gate freely opens to let the water out, the whole is accomplished.

The engravings represent different views or "elevations" of a tide-gate built recently by Colonel L. B. Hanks, at Mystic, Conn., which has completely shut off the tides from about three acres of marsh, which he is laying out as a

lawn. As the tide-gate presents the main difficulty to those who are thinking of making this improvement, we give a particular description.

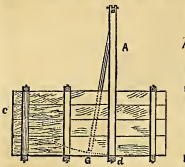


Fig. 1. Fig. 2.

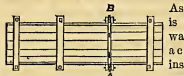


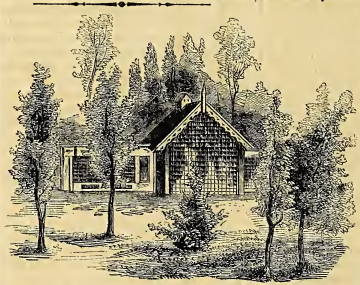
Fig. 3.

As the object is to give the water which accumulates inside a single passage out, and perfectly to exclude water from without, there must be a water-tight flume or trunk in which, or against which, the gate swings. Fig. 1, represents the side elevation of this flume, ten feet long and five high. This crosses through the embankment or dike, and must be made water-tight on the outside by a framing of plank, and by packing some tenacious earth—clay, or clayey soil—around it—called in engineering, *puddling*.

The gate, *C*, is suspended from the top of the uprights *A*. *B*, the hinge being the cross piece. Fig. 3 shows the bottom of the flume, and the manner in which the planks are spiked on to the frame. The side elevation shows the gate as pressed outward by the current, when the tide is falling. When the tide rises the gate is pressed from *c* to *d*, where a strip of plank is nailed at the bottom and sides of the flume, at *d*, making, as nearly as possible, a water-tight joint when the gate is closed. The planking is merely jointed or rabbeted together; all else is left in the rough. The material for the whole is chestnut. The sills, caps, and posts are 3x4 inch stuff, the gate posts 4x6, and the gallows posts 2x3. Two inch planking is used for sides, bottom and gate. The cost for lumber and carpenter should not exceed fifteen dollars. This thickness and size of material is enough for a tide-gate, where the rise and fall is not over six feet. The higher the tide rises, the stronger the gate, flume and dike should be made.

The embankment here is made in the following manner: First a ditch is opened along the line of the dike two feet wide, and going down to the hard pan, which in this marsh is about three feet below the surface. The sod taken from the ditch is placed grass side out, for the outer wall of the dike, making a terrace two feet high along the whole line. The rest of the contents of the ditch are piled up against the sod, to strengthen it. The ditch thus cleaned out is filled with yellow loam or any clayey soil, and packed hard with a rammer to make it impervious to the water. A bank of the same material is raised above the top of the ditch some eighteen inches, and packed in the same manner. Four or five feet from the inside line of this ditch another is dug four feet wide. The sod is taken for the inside wall of the dike, and to finish up the outer wall. The contents are also put upon the embankment. The whole is finished off with gravel, or any convenient soil, on top, making a fine walk. By enlarging the dimensions of the dike, it may be made a carriage-drive or cart-path, with decided advantage to its solidity. As nearly all the material for the embankment is found upon the spot, the expense is much less than one would suppose. The cost does not exceed two and a half dollars a rod. One of the advantages of this kind of embankment is that it grows stronger with time. The turf upon the outside being washed with the tide, soon knits together by the growth of the marine grasses, and presents all the attractions of a green terrace. It should not be forgotten that the width and hight of the dike must always be proportioned to the hight of the tides. In some places an embankment six feet high and ten feet across will be none too strong to resist the pressure of the high tides. As the whole success of reclaiming these marshes hinges upon the permanence of the embankment and of the tide-gate, no pains or expense should be spared at these points necessary to secure good materials and thoroughness of construction.

We are glad to learn that the hints thrown out by this journal upon this improvement have been very highly appreciated, and that these waste lands are beginning to absorb some of the spare capital of our farmers upon the coast. No class of lands present a more inviting field for industry, or offer a surer prospect of reward.



Some Hints about Hen-Houses.

The profit of a good hen-house is realized in the winter. All hens will lay in the Spring and more or less in the Summer and Autumn, but only these which have warm, well lighted, comfortable, well ventilated houses will lay in the Winter. The present is a favorable time of the year to put up a hen-house, or alter over, repair, whitewash, and put in order old ones.

In order to succeed with poultry, they must be clean, well fed, have comfortable roosts and nest boxes, warm but well ventilated quarters, and yard room. They may not be too crowded, nor subject to scares, or handling. Neither may great numbers be kept together. For the comfort of the poultry-man things must be conveniently arranged. And to gratify his taste all should be architecturally appropriate and handsome. Expensiveness is not an element of beauty, and particularly in things of straight-forward practical utility. To most minds it detracts from the enjoyment of an otherwise excellent structure. Some natural, simple ornamentation is well.

The amount of space to be allowed to each hen is variously estimated. If the house be 12 feet deep from front to rear, and the hens have a good yard, there may surely be as many hens kept as the house is feet long, and in our opinion twice as many. That is, a 12x20 house will accommodate 20 hens at least, and we think 40 as well as not. Each hen will then have about 6 square feet of floor room; and if the room is 8 feet high, 48 cubic feet each, which is equivalent to a coop 3 feet 7 inches square and of the same hight. We would not keep more than 40 or 50 hens in the same apartment. It is much

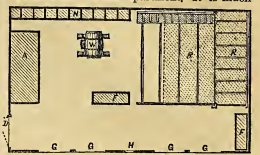


Fig. 2—PLAN FOR A HEN-HOUSE.

Explanations.—*A*, ash-box; *D*, door; *F*, feed boxes; *G*, glazed windows; *H*, hole for ingress and egress of hens; *N*, nest boxes; *R*, roosting ladders—the one with short rounds fixed, the other hinged upon it, and capable of being lifted up horizontal in hot weather; on one end of this is a cleat-ladder, to be put under when the ladder is in a horizontal position. The dotted shading under the ladders represents the muck on which the droppings fall, and are composted.

better to divide them and prevent communication entirely. When too large numbers of hens are confined together, disease in various forms almost always breaks out among them, destroying the profits. The hen-house must also be light. It can not be too light. The cut we give of the poultry-house put up by Mr. Bement, the famous poultry-man, for Mr. Vassar of Po'keepsie, has the entire front of glass, even to the peak of the roof. It is frequently convenient to adapt room in the barn or some out-house or shed to a hennery. This is often better than building a separate structure, for it is warmer, and easier reached in stormy weather. The best floor for a hen-house is a cement one, in which there is an abundance of small stones. In a hen-house 20x12 and 8 feet high, there should be on the floor a dust box to contain ashes, which should be about 6x2½ feet, and a foot deep; a tier of nest boxes extending

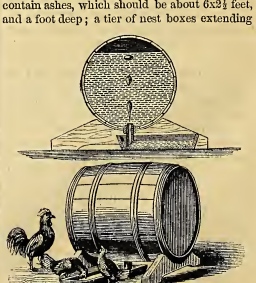


Fig. 3—A WATER FOUNTAIN.

across one end or on the back side of the room, one foot wide and ten feet long; a feeding box or two which would occupy about 3 square feet each; a water trough or fountain taking two

more square feet, and finally a pile of muck or earth under the roosting ladders about 8x8 feet. Thus fully 2-5ths of the floor would be occupied, leaving none too much space to get about conveniently and take care of forty hens.

The roosting ladders should be horizontal and fixtures—at least one should be. The plan is very good to have one ladder 3 feet wide, and for such a house as we describe, about 8 feet long, supported level about 6 feet high (or not nearer than 2 feet to the ceiling) in one of the rear corners of the room and along one end. The rounds should be an inch and a half in diameter, and about 14 inches apart. A post will be required, or a wire from the ceiling, to support one end. Against this ladder another may be fastened, extending from the floor up to the fixed ladder and hinged upon it, so that it may be lifted up and fastened in a horizontal position. The ladder should be a little over eight feet long and the rounds two feet apart, the upper one being two feet from the end.

The water fountain, (fig. 3,) is a very convenient way of supplying poultry with water. It is a simple contrivance, consisting of only a tight keg-barrel, with a hole in the bung, and a tube of elder with the pith punched out, inserted. The barrel is filled with water, the bung and tube put in tight, placed so that when it is rolled over to its place in the frame, the bung will be undermost, and the tube will reach nearly to the bottom of the earthern pan or trough set below. The water will flow out, as the air bubbles ascend within, as shown in the upper section. As soon as the water closes the mouth of the tube, no more air can get in, and no more water will flow out—so the supply will be constant until it is all gone. A large bottle inverted, the neck being passed through a hole in a board nailed across the top of a trough, will answer for a small flock, or a coop—very well.

Reclamation of Swamp Land.

Some time since we received from the Southboro' (Mass.) Farmers' Club, a statement made by Peter Walker of that place, with reference to some successfully-reclaimed swamp land. He had purchased the farm about two years before, the greater part of it being covered with small wood brush and brakes; at the time of making the statement it was nearly all reclaimed, and producing annually at the rate of two tuns of excellent hay to the acre. After having thoroughly drained it, so that the water was lowered *at least* two feet from the surface of the muck swamp, he proceeded as described by himself, in the following extract:

"My method is to dig it up with the breaking-up hoe, for it is impossible to plow it until the sod is rotted. I have dug more or less for 7 or 8 years, usually soon after haying is over, planting with potatoes two years, when the sods are sufficiently rotted to seed down to grass. I put a small quantity of raw manure in the hill for potatoes, and before seeding down, in the winter, I carry on gravel to give the surface a covering of about three inches, and when the frost is out of the surface sufficient to get in the seed, I sow and harrow in Herdsgrass seed and nothing else, and without manure. In the Fall following I spread on compost manure.

"In August 1859 I dug up half an acre, more than half of which was covered with a hard brake sod. In September following I turned the sods over to prevent the grass and brakes from starting up. The first week in May following I planted the piece with potatoes, carried out raw manure with the wheelbarrow, put a small quantity in the hill, and covered the potatoes with the sods, some of which were sufficiently rotted for that purpose. Hoed them twice, making the hills entirely of the sods. Dug the potatoes in September last, and the average yield was a bushel to nine hills—about 380 bushels per acre, the hills being about 3½ feet apart each way. From my experience, I am firm in the belief that the true way to succeed in reclaiming swamp muck land, is, to drain so as to drop the water at least two feet, (or better, three feet,) then plow, or dig up with a breaking-up hoe, and let the sods rot, instead of burning, or covering at first with gravel or sand as many do."

Bag Holders Again.

We have given several descriptions of contrivances for holding bags, (Vol. XX, p. 363, and this volume, p. 44,) having vivid memories of aching arms in our boyhood, and of blame often worthily bestowed for having failed in our own performance. So it is in no small degree from our sympathy for the boy bag-holders that we give our readers descriptions of two inventions which we have no doubt are excellent. The first is Hostetter's patent, made by J. R. Hoffer, Mount Joy, Pa., and is very easy to understand. On the front of a light truck, about 3½ feet long by 11 inches wide, a frame is attached, having at the upper end two stout divergent wires projecting as shown in the cut. The top edge of the bag is turned over these wires, and held firm by the two flat, wedge-shaped buttons which turn down and wedge in between the frame and the wires. The frame may then be raised to accommodate the length of any bag not more than four feet long. When so raised, it is held in its place by the cord and ratchet-wheel seen on the right hand side of the truck. When filled, the bag may be wheeled off wherever desired. Such a truck bag-holder must be very desirable wherever many bags are filled and moved, particularly in mills and country stores.

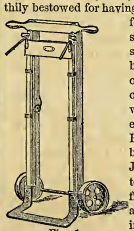


Fig. 1.

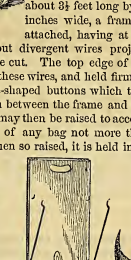


Fig. 2.

The second is a home-made bag-holder, a description of which is received from a subscriber to the *Agriculturist*, Mr. J. Moore, of LaSalle Co., Ill. We give a description of it nearly in his own language, premising, however, that we have made a slight addition to the sketch sent, in attaching the foot-piece or base to the upright.

"I herewith send you for the benefit of your readers a description of a bag-holder of my own invention, which I have used for some time, and like it much. It holds a bag better than any boy can hold it, and is so simple that a farmer can make one in half an hour, of material costing less than a dime. As grain bags are generally of uniform length, it is not necessary that the hooks should be movable up and down, and the spring of the long wires will adapt the holder to bags of any width. *Description*—It is simply an upright board, 4 feet long, and 14 inches wide, which must be fastened in a perpendicular position, either by nailing it to the side of a box or bin, or by securing it to a base of some kind. There are seen four hooks on which the bag hangs while being filled, two short ones upon the board, just high enough to let the bag touch the bottom. The other long hooks are of wire, one sixth of an inch in diameter, and 18 inches long, with a short crook and sharp point at the top, (shown *enlarged* at one side); the lower ends are driven into the edge of the board, and the upper ends standing out 5 or 6 inches in front, 2 inches lower than the small hooks."

Drilling Wheat—Drills.

There is scarcely any operation of farming concerning which practice, in different parts of the country, varies more than in this. The grain drill is a rare sight in New-England, and rare also in many parts of the Middle and Western States and Canada. Still, wherever its use is common, it is held in very high estimation. In saving seed alone, a drill more than pays the interest on its cost. The risk of winter-killing is greatly diminished, and an even seeding is readily secured. In the following communication from Mr. A. Linton, of Chester Co., Pa., written in response to a request from ourselves, the advantages are very simply and strongly set forth, and deserve the attention of every wheat grower who does not use the drill:

THE USE OF THE DRILL.

To say any thing advocating the use of the drill in sowing wheat in this section of country, would be as superfluous as to discuss the excellence of anthracite for fuel, or the utility of steam as a motive power. The use of the wheat drill is so nearly universal here on all land where it can be used, that the sight of a field sown in the old fashioned broad cast way is a rare occurrence.

The advantages of drilling wheat may be very briefly stated as follows: it distributes the seed more evenly over the ground than is generally done in broadcast sowing; the wheat is not so liable to be thrown out by the freezing and thawing that occurs here during the winter; the depth at which the seed is placed in the ground can be regulated to a certain extent, as the moisture or dryness of the soil may require, to insure its speedy germination. It takes less seed; the crops look better, and ripen more evenly than if sown in the old-fashioned way; and lastly, the use of the drill insures a more thorough preparation of the ground previous to seeding, being a good cultivator itself.

As to the points to be possessed by a good drill: It should supply the seed regularly and equally to the separate drill tubes. The grain, as it drops into them, should be plainly in view, that the operator may see at a glance that they are all working properly. It should not be liable to clog so as to prevent the regular flow of the seed. It should have an index to mark the quantity of ground sown, and a fixture enabling the user to regulate the amount of seed per acre. There should be a contrivance to raise all the drill tubes off the ground when turning; each should work independently of the others, and be so attached that its angle of inclination with the ground may be altered to regulate depth. The drills should be eight inches apart, (some prefer nine,) and eight in number. A good seed-sower should be attached, so that grass seed may be sown at the same time the wheat is. These points are possessed by all drills of recent manufacture used here, though there are many different mechanical contrivances to secure these ends. Drilling oats succeeds admirably sometimes but

often fails. The cause of failure I think is owing to drilling the seed too deep; the ground at that season is cold, and seed placed too deeply in the soil is a long time coming up; the plants are stunted, and never after become vigorous.

The corn drill is much used, though not universally. Many farmers still prefer to plant with the hoe, alleging that the growing crop is more easily worked and kept clean, and that it is less difficult to thin out to the right quantity. The extra labor in working drilled corn, is more than balanced by the extra work in marking out the ground and planting with the hoe; but it requires more judgment to thin out drilled corn right, than it does when planted with the hoe. Drilled corn is generally not so much disturbed by birds, as they so often fail in getting the grain, and, if properly managed, will produce more per acre than when hoed in.

Experiments in Wheat Culture.

PLANTING IN HILLS AND HOEING.

Like all other plants, wheat responds promptly to careful tillage, and what the limit of the amount of labor is which will pay, no one has yet ascertained. Up to a certain point, or perhaps rather to an *uncertain* point, the more labor and care bestowed the better will the crop pay. A correspondent from whose letter we quote below, and several others also, find the regular hoeing of wheat to pay. For our own part we have no doubt it will pay for seed wheat, and can confidently recommend the practice of planting a patch to be thoroughly hoed, weeded and cultivated for seed. Before the cutting, the largest and finest ears should be culled, care being taken to secure enough to have sufficient seed for a similar patch another year, even though the largest and plumpest grains only shall be selected, for these alone should be used. All the grain from the seed patch would be good enough for field sowing, and indeed much better than any that could be obtained by screening in the usual way. These ears culled should be the earliest and largest, from those stools which had thrown up most stalks; and the grains sowed again should be the plumpest and largest out of these ears. We give here the experiments of Mr. S. Ransom, of Ashtabula Co., O.

"On the tenth of September 1859, I planted one acre of wheat, in hills one foot by two feet apart, put four kernels in each hill, and covered them with the hoe the same as Indian corn is usually planted. I cultivated it with the hoe on the 15th of October, and again on the 16th of May, with the horse and cultivator and the hoe. The soil is loose gravel of poor quality, except a very small portion from which a barn was removed about twenty-two years since, and from which portion the following calculations were made:

No. of hills on the acre	22,440
Average No. of stalks in each hill, 73, or on the acre	1,638,120
Average No. of kernels in each head, 77, or on the acre	126,135,240
Average No. of kernels to the bushel	848,560

"No. of bushels to the acre, according to the above calculations as ascertained by counting stalks and kernels, one hundred and forty-eight and about five-eighths.

"Planting wheat on poor land is like planting other crops upon poor land: it will not pay. Make your fields rich, and in a good season I will warrant any man one hundred and fifty bushels of most excellent wheat upon one acre of land, if cultivated as above. On the rich bottom lands of the Scioto, Muskingum and the Miamis of Ohio, and also on the river bottoms and prairies of the great west, winter wheat can not be grown to any extent by being sown broadcast, on account of blight or mildew, and by heaving out by frosts of winter. By planting in rows and hills it would naturally be exposed to the action of the sun and winds, and thereby prevent blight or mildew, and by covering with the hoe, prevent heaving out by frosts, thereby securing a good crop.

CHARCOAL A DRESSING FOR WHEAT.

"I tried another experiment in 1860. My lands are coarse or loose gravel of rather poor quality. I sowed an acre of winter wheat (the Blue stem) preparing my ground as follows:

The field was sown with barley in the Spring previous; yield small (18 bushels per acre). I turned in the stubble the last week in August, harrowed it over, then took about eighteen bushels charcoal crushed fine, and top-dressed a strip through the middle of the acre over about one-third of its length; I then sowed on my wheat broadcast and harrowed it over twice. The result was, the heads when ripe were at least twice as long as where no coal was put on. I harvested all together; the yield was forty-three bushels. I think by applying about fifty bushels of coal to the acre as a top-dressing, made fine by grinding in a common bark mill, it would increase the yield at least four hundred per cent., if the soil is poor.

BURNED CLAY AND ASHES.

"In the fall of 1860 I used about one hundred bushels of burned clay, taken from a fallow where timber had been uprooted several years by heavy winds. The soil on which the timber grew was burned together with the old roots and clay entwined, and perhaps some muck; the whole, ashes, clay and muck, after being burned as above, was hauled off in a wagon and put upon the wheat field as a top-dressing, and harrowed in with the wheat. The land was poor quality gravel; the yield was about five hundred per cent. over the remainder of the field where no clay was put. I think there is no fertilizer ahead of this as a top-dresser."

Torrefied Earth, or Burned Clay, is extensively used in some parts of England and Ireland. The heavy, clayey soil becomes greatly amended mechanically, and besides, the clay thus heated absorbs ammonia and holds it, and gives up readily other valuable ingredients which would otherwise be firmly held, and therefore unavailable.

Rye.

There is no better test of the hardiness and value of rye, than the fact that it has a place upon the most exhausted farms. It bears abuse and neglect better than almost any other grain. The facility with which it can be raised has been nearly fatal to much good land in the north. When wheat could no longer be grown with profit, rye took its place, and as it would yield remunerative crops without manure, land was sowed to this grain with no other rotation than grass, until it would not pay for plowing. It is still a common practice, notwithstanding the inroad new ideas have made, to turn up old pastures and exhausted meadows and sow with rye without any manure. A crop of ten or fifteen bushels will about pay expenses, and many farmers are satisfied with this scanty yield.

A rich hazel mold, well drained, or naturally dry, is the best soil for rye. If it is light, it should have manure. The great luxuriance of this plant upon newly cleared forest land shows that it delights in a soil well stocked with food. It is a good plan to manure broad-cast, and plow in ten or twelve loads of stable manure or of good compost, but still more important to apply a part of the manure, which should be well rotted compost, to the surface, and harrow in with the seed. One of the best dressings for this crop is 'fish pie,' or compost made in June, and applied in September at the time of sowing. This is a favorite manure along the sea-board, in the rye growing districts. The fish are sometimes applied broad-cast to the green sward several weeks or even months before the land is plowed; but this is a very wasteful practice. No better rye is raised in the world than along the shores of Long Island Sound, with this fertilizer. A yield of forty bushels to the acre, under favorable circumstances, is sometimes realized.

It is very much better to use some manure and get twenty five to thirty bushels to the acre, than to sow on sward or stubble, and get ten without any manure. As rye will sprout at a very low temperature it may be sown late, but does much better to be put in in September. If it grows too luxuriantly, it may be fed off in October with calves or young stock. Sheep are apt to feed too close and pull up the roots. Late feeding is injurious, as it would leave the roots altogether too bare for winter.

The true place for rye is not as a crop to filch from the soil its last elements of fertility, but to come in, in a judicious rotation of five or six years. A good farmer ought to be ashamed to raise less than twenty five bushels to the acre, when, with a little more manure, he may just as well get thirty five. Rye should have its place in the rotation until we have brought up our farms to a condition where they will grow wheat, an event that is sure to follow tile-draining, and a higher state of fertility.

We have not as many varieties of rye as of wheat, and not much is generally known except of the common winter grain. Spring rye is very little grown, most farmers preferring Spring wheat or barley, where they have land in condition for any Spring grain. The white rye raised extensively in New-Jersey is a fair, handsome article, about the color of red wheat, large and prolific. It is not yet very widely distributed, but enough is already known of its productiveness, hardiness, and other good qualities to determine its value. There is a fine field here for the enterprise of some wide awake farmer. This grain is as susceptible of improvement as wheat or barley, and a few years of careful cultivation from select seed would give us improved varieties unquestionably much better than any thing we now have.

This grain is highly prized in all the districts where wheat is not raised. Chemical analysis shows that it is but a little below wheat in nutritive value, and this estimate is confirmed by the analysis of the stomach. Well bolted, it makes excellent bread, the best substitute we have for the wheaten loaf, and by some preferred to that standard article. As a variety, it is highly relished at most tables, if not in the loaf, at least in short-cakes and biscuits. The bran is indispensable in the loaf of brown bread, which is a good old institution handed down from our grandmothers, and which we trust will be perpetuated to the latest day.

The straw, always the most economical bedding for stables, has of late years become of considerable value in the arts, selling as high as fifteen dollars a ton. But this of course only benefits the farmers in the limited districts near the factories. In the packing of winter fruit, it is thought indispensable by some of our best fruit growers. Rye has always a good home market, is one of the surest crops, and deserves more careful culture and selection of varieties

Notes on the Run—From Albany to Manassas.

MR. EDITOR:—Having recently made a hasty trip from Albany to Manassas, I have thought that a few notes agricultural and horticultural, then jotted down, might interest your readers.

It was the morning of the 17th of June, bright and clear. On the night of the 15th there had been a hard frost, nipping off corn, beans, tomatoes and such like tender plants, injuring them so badly that in many places they needed to be replanted. Here and there a few half-ripe strawberries could be seen—only a few. And the children and the birds had found a few pale red cherries. A few of the earliest roses were beginning to open; all the others were only in bud. So of the azalea, rhododendron and kalmia. On reaching New-York city, it was plain that we had got into a warmer climate. Strawberries and early cherries appeared in market plentifully; here, too, were green peas, snap-beans and early beets. Bouquets, in which roses of all sorts figured in full bloom, were sold about the streets. No signs of recent frost.

Visited Central Park.—What splendid carriage-drives and walks! broad, hard, smooth and clean. And these patches of lawn, those sunny slopes and knolls, and yonder broad parade ground; these bridges; the lake or skating-pond, with the swans and their young broods; the cave and the ramble; the high points for observation of the city and surrounding country—could any thing be finer? The spot known as "the Ramble," is one of the most interesting features of the Park, its original wildness, of rocks, ravines, springs and brooks, of trees and vines and plants, remaining as it was, to a considerable extent, though modified and improved by walks, rustic bridges, canopied seats, boat-houses on the lake, and by the planting of numberless curious trees, shrubs and vines. One needs to be careful amid these winding footpaths, or he will lose his way; but the temptation is very great to wander on and on and on, for at every turn he finds something new to attract him. I think, Sir, you had better advise your readers to visit Central Park, rather than Barnum's Museum. [Our *readers* need no such advice; some will even go there before they will come to the office of the *Agriculturist*.—ED.]

But why so many dead and half dead young trees? They are those which have been recently planted, and which have dried up in the recent drouth. But why were they not watered and mulched? You have salt marsh grass in abundance and handy, and the water which you sprinkle so bountifully on those carriage roads might some of it have been well applied to these trees. With money, men and material provided so liberally, it is not creditable to the planters that so many rare trees should die on their hands.

And why crowd your trees so closely together? Here are Austrian, Scotch and American White Pines and Spruces huddled within four feet of each other, and within the same distance from the walks. Of course, within a few years, these trees will crowd each other and become one-sided, and their lower branches will over-spread the walks and roads. It will then be necessary to cut down half of the number, and to lop off all the lower branches of those which remain, leaving the trees maimed and imperfect. Why not foresee these difficulties at the outset, and plant accordingly? I fancy the response, "Well, Sir, you are right, but public sentiment seemed to require us to plant for present effect and to let the future take care of itself." But faultfinding is not my mood; and indeed there is little in these noble grounds to criticise. Can any body find fault with this Terrace, and the Promenade or "Mall" leading to it? When completed, the architectural effect will be truly grand and imposing. There is nothing like it on this side of the Atlantic [or on the other.—ED.] Drive around to the Deer Park. Here is a section of ground—half an acre, perhaps—surrounded by a wire fence or screen, painted the color of grass, and hence almost invisible. It is so high that the nimblest deer can not over-leap it, so strong that they can not push it over, and yet so light and inconspicuous that at a short distance it would hardly be noticed. Let me commend such a fence to amateurs who would like the luxury of a few deer in their grounds.

But I have not time to speak of everything, and only make note further of the old and new Reservoirs, to furnish water for the many thousand lips of the great city; of the eight streets almost subterranean, crossing the Park, without interrupting its privacy; of the Arboretum, etc., etc. Suffice it to say that no one should visit New-York without making at least a flying trip to Central Park.

* * * Swift we fly over the rails from New-York to Philadelphia, through towns and villages; now we pass handsome country-seats, fertile farms, and then, though rarely, through wooded scenes, where we see laurels, azaleas and rhododendrons in a blaze of bloom, and oh! how beautiful! The Red Cedar abounds on every side, and takes a great variety of forms; now upright and dense, now loose and spreading, and then with branches almost horizontal, with the foliage on the upper side resembling pile of velvet. Near Trenton, the Weeping Willow seems to be in perfection, many specimens being as large and vigorous as full grown oaks. Here, the corn is six inches high; we left it at home just peeping out of the ground, and much of it nipped by the frost. Around Philadelphia, the farmers are making hay, and the wheat crop is turning yellow. Peaches are fully two thirds grown, and promise a large yield.

Much of the land between Baltimore and Washington looks thin and poor; yet here and there are farms which show what good cultivation can do. Probably the railroad runs through much of the poorest land. Yonder are women at work in the fields. Can not, at this distance, discern the color of their skin; they must at least be well sunburnt. All along between New-York and Baltimore the native Juniper is seen by the roadside. Now and then, it is browned up in spots, where its sides have been exposed to harsh winds. Then let not our more northern planters pronounce it too tender, because it sometimes has this appearance.

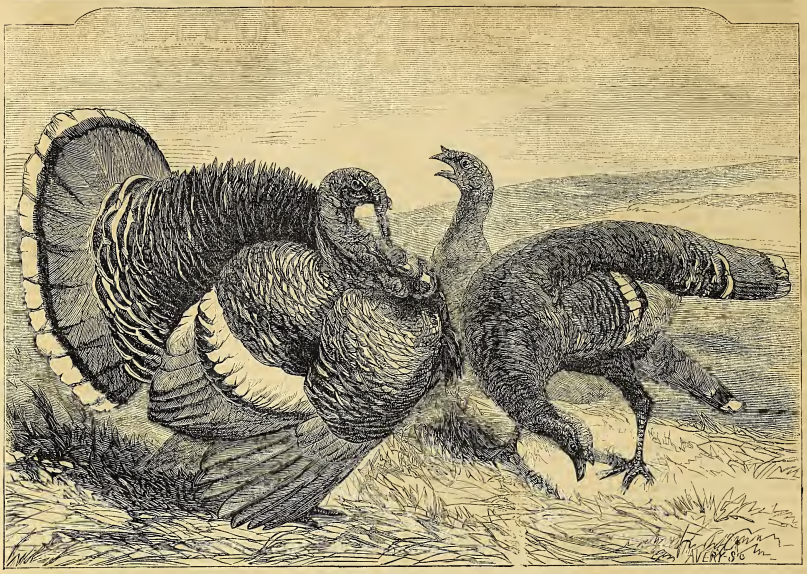
And this is Washington—less a "city of magnificent distances," than when I visited it, twenty-five years ago. The great gaps between the different blocks have been pretty well built up, and its 70,000 inhabitants make the streets quite lively. At present, the nation, as here represented, has beaten its plowshares into swords, and its pruning-hooks into spears. Nearly every other man on the sidewalk is a soldier; cavalry, artillery, and long trains of military wagons continually ramble through the streets; and forts and camps bristle on every hillside. Nobody to-day to the market. A little of everything for sale, here. Meats of all kinds, and suspenders and cambric needles; fish and jack-knives, candy and tin-ware. Strawberries abundant, large and fine, chiefly Wilsons, Alice Mauds and Early Scarlets. Longworth's Prolific, Iowa and Hovey, at a few stands.

Visited the grounds of the Smithsonian Institute, and of the Capitol, White House and President Square. In the first, was surprised to see that the grass around the edifice had been allowed to grow unshorn until now, the 23d of June, when it was being cut for hay! It would seem that an Institution so largely endowed as this, might afford to keep a portion of its grounds under the scythe and roller, at least those immediately adjoining the grand pile. I looked around for the marble vase erected here in memory of Downing, who laid out this place, but was obliged to wade through a large expause of *uncut* hay to view it. A beautiful work of art it is, and worth taking some trouble to see. Here, and in President Square, are some fine specimens of the rarer evergreens. The Deodar cedar, in certain exposures, loses its leader, and makes only a large, spreading mass of branches, but elsewhere, it does well, and becomes exceedingly beautiful. Downing has here set it often in proximity to the Hemlock, and it endures the comparisou bravely, which is saying much. It resembles the Hemlock somewhat in the style of its foliage, but is of a greyish green, and more feathery and flowing. The Hemlock is the richer and grander of the two. The European Silver Fir thrives well here, and has a very dignified, architectural regularity. Very noticeable, too, are the Deciduous Cypress, and the Chinese and Golden Arbor Vitæ, and the Yews, Irish, English and Golden. This last is often set over against a group of darker conifers with fine effect. The same thing is seen in the juxtaposition of the deciduous cypress of soft, yellowish green and delicately cut leaves, with the broad and dark foliage of the Catalpa. And why are there no large trees immediately in front of this majestic structure, and only a few groups of shrubbery set near the foundation walls? Plainly is seen the design of Downing thereby to enhance the loftiness and grandeur of the edifice.

The grounds around the White House, and in President Square, opposite, are maintained in the highest order of keeping. The grading is excellent; the walks are broad, smooth and clean; the grass smoothly shaven and rolled; the trees, in nearly every case, chosen specimens, and these well-cared for. *Some* cunning hand has given admirable shape to these trees: we would like to know his name, that we might praise him. The view from the south window of the famous East Room of the Presidential mansion, is seldom surpassed. Beneath, in the immediate foreground, is the flower-garden, and the lawn with its fountain and flag-staff, the whole skirted with trees. Through a broad opening in front through the trees, spreads out a large meadow with cattle grazing, or reposing in the shade. Beyond this rises the Washington monument, and further on lies the Potomac, winding its way down to Alexandria, until the view is lost in the blue-hills of old Virginia—entering, bleeding old Virginia.

The favorite street trees in Washington, are the Abele and Silver Maple. Now and then a Button-Ball, or Ailanthus is seen, but nine-tenths of the trees are those first named, and their quality is only second-rate. There does not seem to be much system in planting. A city of this age and size ought, by this time, to show fine avenues of large trees. In such a warm climate, they are almost indispensable to comfort.

On board the steamboat for Alexandria. And do these green-hills show any signs of the prevailing war? Only that, here and there on the crests there are forts, each crowned with the "Stars and Stripes," and that a wide strip of forest has been cut away between each fortification and the river. Having procured "a Pass" from the Provost Marshal, (a privilege seldom granted to civilians) we enter the cars for Manassas Junction. Our fellow passengers are nearly all soldiers returning to camp from furloughs. Losing sight of the earthworks around Alexandria, we pass at every road crossing, bridge, or sudden turn of the railway, squads of soldiers, stationed here to guard the track and the telegraph. But where are the farmers and gardeners along this railroad? Only here and there do we see any growing crop. The fences have long ago been burned by roving bands of armed men to light their camp-fires. Now the train rumbles across "Bull Run," whose waters, several miles northward, were once reddened with human blood. And now, we see within four miles of "the Junction." Not a fence or cultivated field or garden is to be seen. The trees have mostly been cut down for fuel and to build the huts occupied by the Confederate army, last Winter. And here are the huts, large villages of them, scattered over the rolling table lands. Arrived at the "Junction." What a scene! It reminds one somewhat of State Agricultural Fair, on its last day. Rough board shanties of sutlers, with flaming signs; tents innumerable scattered over the plain; soldiers, negroes and women running to and fro; horses neighing and prancing; mules braying; locomotives screeching, and a general scene of confusion, noise and dirt. And yonder are the fortifications which kept the Federal army so long at bay. Between these numerous rifle-pits and breast-works, and all over the plain, grass and weeds are now growing luxuriantly. Not a feuce to be seen as far as the eye can reach, nor a cultivated field, orchard or garden. All is one wide scene of desolation. Oh! may the time soon come when these lands shall be restored to cultivation. We plucked a few wild flowers as mementos, and returned, glad to lose sight of war's desolations.



THE DOMESTIC TURKEY—(*Meleagris gallopavo.*)

Engraved for the American Agriculturist.

As Americans we must all feel a pride in this grand bird, the largest of gallinaceous fowls, the noblest feathered game of our forests and mountains, yielding the most savory flesh, most easily domesticated, and, in its domesticated state, disseminated and valued over the whole civilized world. America, and particularly the United States, is its home. There is hardly a rocky ravine, a hill, or wood-covered mountain from Maine to California, where the wild turkey-cock has not strutted and swelled, puffed and bowed, doing honor to his dame, or where the hen has not led forth her numerous brood. The cracking rifles, and march of civilization have banished the wild birds but introduced the tame ones—in fact, however, we may say we have domesticated the wild turkey Mixed though our domestic varieties are with those for a long time bred in Europe, still they are constantly crossed with the wild ones of our forests whose eggs are frequently hatched under domestic poultry. Wild turkeys are occasionally shot in all the States of the Union, except, perhaps, in Connecticut and Rhode Island, where, if a flock is ever seen now-a-days, it is very seldom.

The beautiful engraving we present shows the fine contrasts in color of plumage, and the graceful game-like figure of the domestic turkeys. The wild ones are slenderer and better adapted to flight and to running. The flights of the tame birds are often very long; not unfrequently they fly half a mile or more, and the only trouble about keeping them is that they will wander so far, and do such damage in grass and grain fields. This injury is not from what they eat—for though they eat corn of all kinds it is a very good investment, while they eat an immense number of worms and beetles also—but they do injury by trampling and breaking down the crops. The variety of colors in turkeys is very great. The wild ones vary somewhat, but are prevailingly of a dark, bronzy-brown, of great lustre, showing a beautiful metallic, coppery iridescence. Among tame ones we find all colors from pure white to jetty black, and all shades of brown and bronze, ring-streaked and speckled, but in none does the lustre compare with that of the wild. Occasionally these birds grow to a very large size, the cocks weighing 35 to 40 pounds live weight. They continue growing 4 or 5 years, and can hardly be said to be fully mature before they are 3 years of age; birds therefore, both cock and hen, which are used to produce breeders, should be three years old.

Plant the Bulbs Early

When the Dutch Bulbs can be obtained in September, it is well to plant them at once. An earlier and a finer bloom will be obtained than when left until just before the ground freezes up for the Winter, though they may be planted as late as December. There need be no delay with those lifted and dried last Spring. A small collection may be planted with the varieties interspersed, but where the assortment is large it is best to set the tulips by themselves, the hyacinths in another bed, with a separate place for the crocusses, crown imperials, etc. Some florists carry it still further, and set each *color* of a variety separate from the others, and even place the tall sorts of each color apart from the dwarfs of the same variety. The books, too, are so prolix in their directions, how deep to excavate the soil, what proportions of sand, muck, leaf-mold, cow manure, etc., should be used, that many persons who otherwise would grow these flowers, are deterred from so doing. Did they know that any good garden soil will answer, and that it is as easy to plant a bulb as to set out an onion, they would no longer hesitate.

Most of these bulbs are imported from Holland, where they mature better than with us, and on this account are called Dutch, though they originated in different parts of the world. In selecting bulbs from the importer, choose those of a solid, firm character. By all means discard those which are starting into growth, for planted thus early, they will continue to grow, and be injured by the frosts of Winter. Let them be bright and hard, and the further removed from a growing state the better. If one has a choice of soils, let him select a good loam, somewhat gravelly or sandy, and if muck or peat and cow manure can be added to enrich it, all the better. Fork or spade it up lightly. Oval or round beds are very pretty. Set a few of the taller growing Crown Imperials in the center, three to four inches deep and one foot apart—white and Japan lilies may be interspersed among them; surround these with the late growing Tulips, followed by the dwarf sorts. Set six to ten inches apart, according to their hight, and cover with two inches of soil. Hyacinths may follow next in another circle or two

eight inches apart, covering to the same depth as tulips. Complete the bed with crocusses and snowdrops alternated in masses, the former two inches and the latter three inches deep, and both 2 to 4 inches apart, or in rows 4 or 5 inches apart. Upon the approach of Winter, cover with coarse stable litter, to be raked off in early Spring. In the season of blooming, from the first of April to the middle of June, the gay colors, varied forms and odors, will well repay the careful cultivator.

Newer Annuals.

The double Zinnia, now two years out, is a desirable thing. It was loudly trumpeted in England, before it was imported here. Dr. Lindley said it was "not a whit less interesting than a double Dahlia." Few will agree with him there. Certainly, we should not, judging from those raised last year in our own garden. They were double and semi-double, but were less brilliant in color than the old single sorts. The several new sorts of Japan Pinks, single and double, are really valuable acquisitions. Flowers larger than the old Chinese pinks, and of bright crimson, striped, mottled, etc., etc. The seeds are to be had now of all florists. If first started in a pot or box of earth in the house in April, they will flower the first season.

A Good Thing for the Flower Garden.

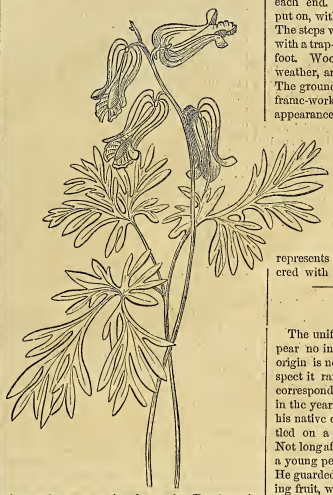
The present passion for bedding-plants is causing a good many plants, formerly confined to glass-houses, to be tried in the open air, from spring frost to fall frost. Among these we have seen the *Calceolaria*, and *Gaillardia picta*, planted out in the open ground this Summer, and the *Mimulus*, and the Dusty Miller Geranium, and even the Egyptian Lily in moist, shady places.

In our own garden, we have tried the Brugmansias for two years, and find them exceeding our expectations. This is the old family of *Datura*, changed to *Brugmansia*. Any one can raise the plants from cuttings, which strike quite readily. For immediate and effective show, the main reliance must be on large plants. Having such an one, select an open spot on the lawn, cut out a circular bed, three or four feet in diameter, and enrich it with old manure. Set the plant from its pot into the center, and tie to a firm stake. By mid-summer, it will make a grand sight, and will give pleasure by its show of an abundance of blossoms all summer long.

There are several sorts, more or less desirable. *Brugmansia Knightii* is our favorite. The flowers are pure white, tubular, often six or eight inches long, and delicately fragrant. B. *sanguinea* has flowers white and green. B. *floribunda* is orange-colored. As soon as frosts come, re-pot the plants, cut back the tops considerably, and set away in a cool corner of the greenhouse, or in the cellar. Treat them in all respects like the common scarlet geranium.

Squirrel Corn (*Dicentra Canadensis*).

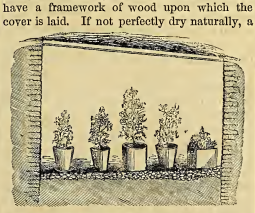
This beautiful little flower of early Summer is one which, with care to reproduce in the garden the conditions of the rich woodland in which it rejoices, namely: some shade, a vegetable mold, and a moderate degree of moisture, though not wetness, grows and blossoms beautifully, giving a freshness and interest to some quiet nook which is very attractive. The botanical name is *Dicentra Canadensis*, and this indicates its hardiness. It is a low growing perennial, throwing out underground stems which form tubers about as big as small grains of corn, from which the English name is derived. These tubers are at this season ripe and may be taken up and removed to the garden. The flowers are greenish white, with a tinge of red, and fragrant. This form is quite peculiar, as represented in



the cut, but not so singular as the Dutchman's breeches, (*Dicentra cucullaria*,) which is a closely allied flower that blooms a little earlier.

Flower Pits.

In response to several inquiries, we introduce the above cut to illustrate the method of constructing a pit for keeping flowers and tender plants during Winter. These pits should be dug in dry soil, and may be stoned or bricked up, or have a framework of wood upon which the cover is laid. If not perfectly dry naturally, a



drain should be constructed to carry off water. It is best to use green-house sashes to cover the pit, but not absolutely necessary. A correspondent in a former volume described with sufficient minuteness a pit which worked well, and we reprint it here: "A pit was dug twelve feet long, six feet wide, and six feet deep. The digging occupied one man nearly three days. Locust posts were driven at each corner, and two others on one side for the door, and a lining of spruce boards an inch thick nailed on the inside of the posts, leaving a space of three to four inches between the boards and the earth. This space was closely packed with coal dust, fine ashes, and other similar materials at hand. The bottom was paved with rough stones. The posts were kept firmly in their places by a brace at each end. A common frame-work was then put on, with three sashes; a door fitted closely. The steps were outside of the door, and enclosed with a trap-door. The sashes sloped about one foot. Wooden shutters were put on in severe weather, and covered with a layer of salt hay. The ground around was neatly sodded, and the frame-work painted, making a very good appearance. The carpenter's bill, including outside shutters, was $58, making the entire cost somewhat less than $65. It held about 125 medium-sized pots; and every plant kept in it the past Winter is untouched by frost. It was tightly closed when the severe weather came on, and not opened until the mild days in February." The preceding engraving represents a stone or brick walled pit covered with sashes and a mat of straw above.

The Seckel Pear.

The uniform and universal excellence of this pear no intelligent person will doubt, but its origin is not so fairly undisputed. In this respect it ranks with the Delaware grape. A correspondent of a Minnesota paper says that in the year 1761, a Frenchman, banished from his native country, came to America, and settled on a point of land below Philadelphia. Not long after he had built his cabin, he observed a young pear tree growing up near his door. He guarded it until it came to the age for bearing fruit, when he was rejoiced to find the product of superior quality. He carried a few to market, where they found ready purchasers. And so on for ten or fifteen years his seedling pear tree brought him a handsome little income. The Frenchman kept the whereabouts of the tree a secret as long as possible, and when it was discovered, he forbade cions to be taken from it. As he always kept an old *sickle* hanging on a limb of the tree, it came to be called the Sickle-tree, and hence the Seckel. In the year 1821, he died, and bequeathed his little home and favorite tree to Stephen Girard, by whom grafts were soon distributed.

That's one story. Mr. Downing tells another, to wit: that the seedling was raised by a cattle dealer, near Philadelphia, known as "Dutch Jacob"; that he afterwards sold the land on which it stood to a Mr. Seckel, who introduced the fruit to public notice. Afterwards, the farm and tree became the property of Mr. Girard. The original tree is believed to be still alive.

Manure for Pear Trees.

Undoubtedly, there are some soils which need very little manure. Such, especially, are the deep, virgin lands of our meadows, where the deposits from the overflow of neighboring streams have been accumulating for centuries. But such lands are not everywhere to be found. There are large districts in which the soil is comparatively light, and which have been exhausted by long cropping. Let no one think of growing pears here without manure. This tree is a gross feeder, and soon consumes the elements of nutrition within its reach. Both the

size and color, and the flavor of the fruit are determined by the richness of the soil.

What manure shall we apply? Barn-yard dung, simple and unmixed, might be safely used in moderate quantities; but doubtless, a mixture of this, with rotten leaves, sods, ashes, bones, night-soil, street-scrapings and the like, would be better. Let these lie in a heap a few months, and then shovel them together, and the compost may well be labelled, "Pear-tree specific." Spread this dressing over the roots every Fall, and work it into the soil in the Spring. Of course, the weeds and grass are to be kept down; for about as much good will come from this tillage as from the manure.

The above directions apply with special force to dwarf-pears. The quince-root, being small, can not throw out its rootlets far and wide in search of food, when the soil near the trunk is exhausted. The food must be brought to it, regularly, and enough of it, too, to supply its constant wants. Follow this up, with systematic pruning, and the labor will be well repaid.

Water in Ornamental Gardening.

Persons living on the sea-board, or on the shores of our lakes and rivers, need little said to them in reference to our subject. They know well how important a feature water is in their scenery. They have become so attached to it, that it seems they could hardly live without it. A friend of ours who once lived on the sea coast, but now resides in an inland village, often goes down at evening to the shore of a fish-pond, that the motion of the little wavelets may remind him of the rolling sea! When persons who have long resided near the water-side come to travel through scenery otherwise beautiful, but lacking this one feature, they exclaim: It's all very well, but oh! where is the water!

Fish Ponds.—It is our present purpose to speak of water on a smaller scale—of the uses that can be made of it in lawns and gardens, and retired portions of one's premises. Few things are pleasanter than a simple stream or pond of clear water, partly overhung by trees and vines, and filled with fish. If our miniature lake is large enough for a boat, this will add much to its beauty and enjoyableness.

There are many places now destitute of this attraction, which might possess it. Take, for instance, a valley with a small stream running through it. Throw a dam across the lower end of the valley. Make it of stones, and firm enough to resist the pressure of any freshet. Have a waste-way large enough to carry off all superfluous water, and to drain the pond whenever necessary. Care should be taken that the sides of the pond be irregular and flowing, not square, or exactly round. From no point should the spectator be able to see the whole body of water at once. The stream should be large enough and sufficiently constant, to afford a steady flow of water in and out; else we shall have for our pains nothing better than a morass or frog-pond. At the outlet, the stones of the dam should be laid in a rough, picturesque manner, so as to form a musical cascade.

——The dale
With woods o'erhung, and shagg'd with mossy rocks,
Whence on each hand the gushing waters play,
And down the rough cascade, white, dashing fall,
Or gleam in lengthen'd vista through the trees.

Management of a Brook.—But a stream of water may be enjoyed in a different way, and on a still smaller scale. It may not be advisable generally to introduce a brook into a highly dressed lawn or pasture; we should rather say, bring it in at some side corner, some shaded nook, where there is some little air of natural rusticity. Here, lighten the native wildness by bringing in bowlders and mossy logs and stumps; plant forest trees, and shrubs and vines and plants from the woods, until the place is completely embowered, and has much the appearance of a little forest. Make the sides and bottom of the stream jagged with rocks, and plant trailing vines and various water-loving plants to overhang it. Perhaps a cascade or miniature waterfall can be constructed, whose silvery music will always be pleasant. One of the most agreeable incidents in a recent journey of the writer was a visit to a friend's cottage, near which was a scene like what we have above hinted at. And we now refer to it the more earnestly, because we *know* it is a practicable thing, and a cheap and simple source of enjoyment. Of the children's water-wheel, and their fairies' grotto, and their hut, we can not now speak more particularly, though we shall not soon forget them. Children always enjoy water, and in making water-wheels, boat building, wading, bathing, and skating in Winter, the brook and the pond cultivate mechanical ingenuity, and afford them amusement and exercise.

Fountains and Jets d'eau are more artificial and costly, and properly belong to the highly dressed parts of the ground near the house. The water to supply them is commonly brought in through pipes underground from some elevated reservoir. When the water is abundant, and the entire fixtures are well made, and of a pure classic design, the effect is very good. The silvery plash of the water in its marble basin is very soothing in a hot summer's day. When the supply of water is quite small, instead of attempting a jet, a better way is to have simply a dripping fountain. "A basin of any material," says a judicious author, "from the coarsest common stone to white marble, with a block of the same in the center, supporting a graceful vase, in which the water boils up and falls gently over the rim into the basin, will give more pleasure both to the eye and the ear than any other application of the same amount of water." And again: "A small clear stream may be made to break from an apparently natural fissure in a mass of rock-work, and flow down its side into a pebbly basin below; a graceful nymph may pour water from her urn; or many other beautiful uses may be made of even a small quantity of water, always provided it be of crystal purity. But by all means avoid making the likeness of bird, beast, or fish, throwing water from its mouth: in spite of its frequent use in celebrated fountains, this is too much like one of the most disgusting ills that flesh is subject to, to be anything but revolting to good taste."

Water-Pipes, etc.—For bringing in water from distant reservoirs, iron and lead pipes are unquestionably the most durable; cement pipes, well laid, are good, but logs of the right material, well bored and properly laid, will last many years. We have lately examined a set of log-pipes, a half mile long, which run down one hill and up another, through which a stream of water has flowed fifteen years with only two short interruptions. And we could not see why they might not last for as many years to come. Of the hydraulic ram, the wind-mill, and other contrivances for introducing water, we have not the space now to speak. This whole subject is an important and interesting one, and we commend it to the thoughts of our readers.

Cherry and Plum Trees.

In the partial failure of these trees in many portions of the country, there has been a strong tendency to abandon their cultivation entirely. A very unwise proceeding. The panic, we hope, has already spent itself, and trust that men will again return to their reason.

CHERRY TREES.

In reference to the bursting of the bark, and the dying out of cherry-trees from the cold of Winter or from other causes, these evils are not absolutely beyond control. They should be charged, partly at least, to the practice of planting the trees in too rich and deep soil. In such situations, they make a very rapid growth, the wood is soft and watery, and when winter comes, the tender tissues are frozen and rent asunder. Here is an item from our own experience, illustrative of the above: Ten years ago, we bought eight young trees of the finest improved varieties, among which were the May Duke, White Ox Heart, Black Eagle, Black Tartarian, Yellow Spanish, and Downer's Late Red. Four of these were set in a rather low and very rich and deep soil; and four of them on higher land, and where the soil was light and shallow. Indeed, where the last four stood, the top soil had been plowed and scraped off a foot or more, and carried into the lower ground where the first four stood. Yet the two lots were not more than fifty feet apart, the only difference being in the character of the soil, and in about fifteen feet of altitude. Now, mark their history. The first lot grew vigorously for two or three years, but soon began to show ruptures in their limbs and trunks. After a while, two of them died outright in a single winter, and the others are now about half-dead. They bear a little fruit—only a little—on the few surviving limbs. The second lot grew quite slowly. They are now all alive, have only a few spots of rupture, and bear good crops almost every year. This year, they have done admirably. Such experience and observation lead us to think that if cherry-trees were treated to a little more neglect, giving them rather poor soil, setting them on exposed sites where they would grow slowly, and ripen their wood earlier, they would succeed better than they now generally do. Is not this worth a fair trial?

THE PLUM TREE.

This is a comparative failure in many regions, owing to the black knot, or the ravages of the curculio. Yet in other places, and under a certain course of management, it succeeds tolerably well. It is a plain case that the plum will not thrive and be fruitful, if neglected.

Whether the knot is caused by an insect puncturing the bark, or is a fungus arising from a diseased constitution of the tree, we will not now stop to consider. Experience shows that the only sure way to manage it is to cut it out, and cut it out again, whenever it appears. Cut down to the last vestige of it, and then cover the wound with shellac varnish or grafting wax. Begin with the tree early in the season, cut out every wart on the large limbs, and cut off every small limb that is affected, and burn it. If it be an insect that causes the knot, he will thus be put out of the way for at least one year. Do this for several years, and persuade the neighbors and the nurserymen to do it; and the knot will gradually disappear, or what little remains will do no serious injury.

As to the curculio, we have heretofore discussed his case quite at length, and now will only repeat that some growers succeed well by paying

the ground beneath their trees, so as to prevent the insect burrowing in the ground in the Fall; others cover the ground with a coat of mortar two inches thick; others plant their trees around the kitchen door where the constant treading of the ground, the frequent jarring of the tree, and the various domestic odors and noises become offensive to the curculios; while others set them in the hog and poultry yard, where the rooting and scratching answer the same purpose; and others still are very successful with the wash recommended on page 177. Let any of these methods be tried, as most convenient.

We have long observed that plum-trees succeed better in city back-yards, than in country orchards; and plainly, because of the constant passing to and fro, the stamping of the ground, or the paving stones, or such like reasons. The Grand Turk don't like to be so much annoyed by the presence of men, women, children, and chickens; he don't like such hard floors, don't like kitchen odors and washes, and so he leaves in disgust.

We now and then hear of "secret" and "patent" methods for expelling the curculio, but after all prefer to fall back on those before mentioned, or, better still, on the practice of jarring the trees when the curculio is on them, and gathering up the fallen insects into sheets and burning them. *

Weeping Trees.

We are not insensible to the beauty of natural upright trees; and, most of all, to the noble denizens of our native woods. Nor are we ignorant of the fact that some of the imported pendulous trees are rather tender in our northern climate, and that others, after making handsome progress for a few years, at length out-grow the stock on which they are budded or grafted, and break off, or get into other bad conditions. But this is not so with many.

Beautiful and indispensable as may be the favorites of our forests, why need we be confined to them? Some persons would plant only elms; with others, the maple is the favorite; with others, evergreens; and with others, weeping trees. Let us avoid either extreme. Nature gives us spiry-topped trees, like the Larch, Lombardy poplar, and many of the conifers; round-headed trees, such as the linden, ash, maple and chestnut; pendulous trees, such as the willow, white elm, etc. Taking a hint from nature, gardeners have sought out and introduced a number of other drooping trees, so that now, in addition to two or three new willows, we have weeping oaks, poplars, birch, beech, larch, ash, laburnum, sophora, thorn and others. Why not use all sorts of trees, mingling them as nature does, either with little regard to laws of "effect," (yet generally accomplishing that end), or arranging them artistically, to reach special results?

Just how and where to place them, is not so easy a matter to decide; yet a few things are plain. Drooping trees of fine form may well stand conspicuously upon a lawn, if not more than one or two be in view at a time. They answer a fine purpose when set near the outskirts of a group of round-headed trees, as if there by accident. In such places, they show the peculiar style of their branches with marked effect. The margins of streams or lakes are also appropriate places for them. For cemeteries, they are very suitable. They make a partial substitute there, for the beautiful weeping willow, which is too tender at the far north. They have, too, this special fitness for burial lots, viz.: they do not often become too large for the space in which they are set, a thing which can seldom be said of the trees commonly planted in cemeteries. This thing, at least, is certain, that these trees wherever planted attract much attention. They suggest ideas of art, of something peculiar and different from the ordinary ways of nature.

In our experience, the following are among the hardiest and best of these trees, viz.: the old European weeping Ash, weeping Mountain Ash, weeping Linden, weeping Scampston and Camperdown Elms, weeping Beech, Birch and Oak.

Fruit Growers' Society of Western N. Y.

From the discussions of this Society at its annual summer meeting held in Rochester, June 25th, and reported in full in the *Rural New-Yorker*, we condense the following:

A vote for the best standard pears for family use, gave Bartlett 10, Seckel 9, Flemish Beauty 7, Osband's Summer 6, Sheldon 6, Lawrence 4, Doyenné d'Eté 4. For the same on quince, Seckel 9, Easter Beurre 6, Louise Bonne de Jersey 4, Glout Morceau 4, Beurre d'Anjou 3, Duchesse d'Angouleme 3. For market, on pear stocks, Bartlett 9, Sheldon 5, Lawrence 3. On quince, Duchesse d'Angouleme 10, Louise Bonne de Jersey 9, Seckel 4, and Flemish Beauty 4.

In the discussion of manures and their application, charcoal was very highly spoken of for fruit trees, particularly as an absorbent. An apple orchard, planted by H. T. Brooks, President, six years since, showed a marked difference in favor of the coal left where a charcoal pit was burned two years previous to planting. The trees receiving the benefit of the charcoal were nearly twice the size of the others. In using manure, it was recommended to apply it on the surface. Mr. Downing spreads it on the ground in Autumn, and forks it in in the Spring. Salt was considered a good manure for trees, but care is needed in its application. Too much salt will greatly injure if not kill the trees.

Two remedies had proved effectual for the currant and gooseberry worm. One was to dust the leaves plentifully, at least every other day while the worms lasted, with dry slacked lime. A few days' neglect would ruin the crop. The other remedy, equally as effective, was strong suds, made of soft soap or whale-oil soap, one pound of soap to four gallons of water, applied every other day.

For the American Agriculturist.

Strawberry Culture at the West.

A VISIT TO THE KNOX FRUIT FARM.

As an amateur in strawberry culture, I made a journey of nearly 500 miles and back to visit the fruit farm of Mr. Knox at Pittsburgh, in the midst of the strawberry season the present year. I can truly say that from what I there saw, I felt amply repaid for my trouble. I have examined both large and small plantations of fruit in different States, but have never seen either the one or the other, unless in a few private gardens, kept in so fine order as Mr. Knox's fields throughout. I think it safe to presume that no grower in the United States, if in the world, has a larger breadth of soil under strawberry cultivation than Mr. K.

The first object of high gratification, on reaching his grounds, was the fine collection of varieties in the specimen beds, which enabled me to see growing, side by side, and to taste consecutively, the most celebrated kinds, both new and old, of this favorite fruit. To give the full results of my observation in this particular would occupy too much of your space; I must therefore confine my remarks to matters of practical interest to the million.

The first cause of serious disappointment was the sight of a large field of Wilson's Albany plants, only in their second year, and yet not bearing more than half a crop of inferior fruit. Large numbers of the plants seemed to die in the very act of fruiting. I have since seen the same results in this vicinity, and heard of it elsewhere, from which facts I infer, that under the best treatment, the Wilson's Albany can not be relied upon for more than one [or two] year's productive cultivation. Whatever it may occasionally, or for a single season, produce, it is certainly very far eclipsed for home cultivation by that elegant and luscious berry, the Triomphe de Gand—now the favorite both at the East and West.

It must not be supposed that Mr. Knox limits his fruit cultivation to strawberries. Devoting some 50 acres to them, he has also 10 of raspberries, 10 of New-Rochelle blackberries, and large quantities of currants, apples, and peaches. Of late years Mr. Knox has given special attention to grapes, having succeeded beyond his most sanguine expectation with the native varieties, especially Concords and Delawares. He has now 10 acres planted in vineyard, which will soon be increased to 25. His style of trellis is unrivalled either for garden or field culture. It is about seven feet high, built with posts, cross pieces and perpendicular slats, like a picket fence, giving the best possible opportunity for the spread and support of the vine.

EXHIBITION OF STRAWBERRIES IN PITTSBURGH.

I was very fortunate in being present when Mr. Knox made his public strawberry exhibition in the city of Pittsburgh. It was well for the gentlemen who secured honors and prizes at the *Agriculturist Strawberry Show*, that he was not within convenient distance for competition. Without any attempt to display great numbers of varieties, as he could easily have done, Mr. Knox contented himself with exhibiting only the best. Among these, the central object of admiration was a magnificent show of Triomphe de Gands. I was glad to learn that Mr. Knox's expectations with reference to this favorite variety had been more than realized by the product of the present season. Not only was the fruit large, brilliant, and fine flavored, but abundant in quantity, in this latter respect exceeding, as he informed me, any representations he had ever made.

STRAWBERRY SUPPLY OF CHICAGO.

The strawberry season at Pittsburgh is two weeks earlier than at Chicago, although by importation from the south the market here is supplied while "winter lingers in the lap of spring." During the last three years the strawberry supply for this region has increased beyond all accurate estimate. As yet, however, few berries are cultivated in the West besides the Wilson's and other common and coarse varieties. The Triomphe has this year been introduced for the first time, in any considerable quantity. The firm of Kidder & Knox, at Evanston, 12 miles north of this city, have succeeded in growing it in as great perfection as the senior partner at Pittsburgh. Its cultivation here extends our strawberry season from two to three weeks. The parties named will continue to market this variety during the present week, say to the 25th of July.

FRUIT FOR THE WEST.

The present has been a wonderful season for fruit of all kinds in the West. Every variety, both wild and cultivated, has been produced in abundance, and prices have consequently ruled exceedingly low. The results have been discouraging to professional cultivators, but they are clearly advantageous to the public, and will doubtless tend to more general cultivation for home consumption of all the choicer products of the fruit garden.

A HIGH COMPLIMENT.

While on an excursion westward from this city, I fell into conversation with a very intelligent gentleman, who, after an allusion to your paper, emphatically said, "if I were shut up to the taking of but one periodical, that one would be the *American Agriculturist*." Doubtless your list of subscribers enrols many of the same opinion, and has room for more.

Yours truly, Z. Y. X.

Chicago, July 23, 1862.

"FATHER IS COMING HOME!"

(Engraved for the American Agriculturist.)

Evening comes and the labors of the day draw with the day to a close. Quiet reigns; the poultry seek their roosts, the cattle compose themselves for the night; and men whose days are spent in labor, whether of the hands or the brain, gladly leave their work to enjoy their rest. The weariness produced by labor only hightens the pleasures of home; tired hands toss the plump baby into the air, and catch it again as if it were of but a feather's weight—and the back which ached well in the hay field is only invigorated when the boy is lifted upon the shoulders for a turn in the yard. A man has no right to work so hard, with either brains or body, that he can not enjoy the prattle of his children, or a good talk with his wife. It is a waste of life to live without enjoyment, and what enjoyment is comparable with that which parents have in their children, and each other in the quiet of their own homes. A happy home is a near approach to heaven upon earth, and it may as well be enjoyed in the cottage as in the palace—in fact, when we consider how much oftener real happiness dwells in the humble cottage, we give hearty preference to the wealth of the poor man, rather than to the golden store, houses, lands, and perplexing cares of the rich. Happy is he who returns at evening to give joy to so happy a family group as we have presented in the engraving before us. How the expressions of "Welcome home," and of sympathy with the children, mingle in the face of the wife, and how natural and exuberant the joy of the children's greeting! One at least will doubtless assure his readers that while there is always joy to the father in coming home, this feeling is rendered inexpressibly intense upon returning from a sojourn in distant lands.

Farmers, Write.

Yes, write for this or some other paper. Not, if you please, with the intent to make a display of learning or fine writing, but to communicate facts, and notes of experience that will be useful to others. The approaching season of comparative leisure, while results are fresh in mind, is the time to write. Take up any crop or crops of the year, and give us the history. The land was high or low, wet or dry, drained or undrained, poor or rich, old or new. It was plowed in this or that month, and thus or so. The manure was of this or the other kind, and was hauled out at such a time and applied in such a manner. The seed was sowed or planted on a certain day of the month. The growing crop was managed in a certain way, and when ripe was gathered and measured or weighed, and its value estimated, above expenses. Now, give us such simple and minute histories, in plain language, and they will be well worth recording. It is taken for granted, however, that everything is done *accurately*, else all inferences and estimates will amount to nothing. And not only the operations of the field, but notes on stock-breeding and raising, and on the orchard and garden, are worth writing out for publication. As we look abroad over the wide parish of our readers, we feel that there is much useful information here and there, which might profitably be sent to us for dissemination.

A New Foe to the Pine.

We have spoken of insects on the White Pine, looking like mildew, but which, on close inspection, proved small bugs. And now we report a new foe, thus far appearing only on the Scotch Pine. In June last, we observed what seemed little bits of froth, of the size of a walnut, found to contain, in each case, a very active grub, of the size and shape of a large grain of wheat—the forward half was black, the after part brown, shaded with red; he was found chiefly on wood of last year's growth; there was a hole in the bark of the size of a pin, and exuding sap produced the foam. Hand-picking failed on large trees. Whale oil soap and similar reme-

dies may, perhaps, do some good, but we had not the patience to try them. It would be a great calamity to lose this tree and the White pine, or to have them seriously infested with insects. Some of our readers may have something to report as the result of their experience.

How to Collect and Preserve Insects.

In reply to various inquiries the following directions may perhaps be satisfactory and useful:

1. For collecting insects. A net of the thinnest gauze, about a foot in diameter, and two feet in depth, attached to a circle of brass or iron wire (just strong enough to keep its shape when used) and fastened to a light stick about a yard long, a pocket full of wooden pill boxes, some small bottles and old envelopes, are the simplest materials for daily use. The net is to aid the hands in catching insects—the boxes and bottles to secure them, and the envelopes to hold butterflies or dragon flies, which should have the wings folded together and be slipped in so as to prevent injury from fluttering. At home, they can be most readily killed by putting them into tightly corked, wide-mouthed bottles, with a piece of paper soaked in chloroform. A note book in which to jot down localities and plants on which insects are taken, as well as those on which caterpillars feed, is valuable. If these notes are numbered and corresponding numbers attached to the insects, they can easily be referred to. Caterpillars should be kept in separate

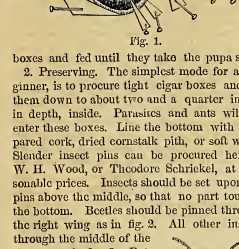


Fig. 1.

boxes and fed until they take the pupa state.

2. Preserving. The simplest mode for a beginner, is to procure tight cigar boxes and cut them down to about two and a quarter inches in depth, inside. Parasites and ants will not enter these boxes. Line the bottom with prepared cork, dried cornstalk pith, or soft wood. Slender insect pins can be procured here of W. H. Wood, or Theodore Schrickel, at reasonable prices. Insects should be set upon the pins above the middle, so that no part touches the bottom. Beetles should be pinned through the right wing as in fig. 2. All other insects through the middle of the thorax as in fig. 3. Butterflies and moths should have their wings expanded soon after they are killed, so that they may dry in that position. Fig. 1. Most other insects can be preserved in alcohol, and remain soft for some time, if it is not convenient to pin them at once. Very small insects may be gummed upon a bit of stiff paper and pinned as in fig. 4. After pinning, those of like families should be arranged together.

Fig. 2.

3. Books. There is no good book for classification, as yet, in this country. Westwood's Introduction to Entomology is the best ever written abroad, but it is expensive, some $12 or $14. The best practical work for the student and farmer in this country is "Harris' Insects Injurious to Vegetation," now republished with many illustrations, price $3 uncolored; $6 colored. Every intelligent farmer should have it. Fitch's "Noxious Insects," is also of great value. The Entomological Society of Philadelphia have a publication at $1 per year, which is entirely devoted to this subject (E. T. Cresson, Sec'y.), and the Smithsonian Institute is from time to time issuing catalogues of the large number of North American insects already described. Any one who takes up the study in earnest will find plenty to do, and a number of active and energetic persons in different parts of the country engaged in the same pursuit.

Fig. 3.

Fig. 4.

Wine.

The statement is correct that wine is not *made*, but is a natural *product*. It grows, and when the soil, the air, and the sunshine and rain of heaven do not furnish the article, all the art of man is expended in vain in its "manufacture." There are some grapes which will not, even when the vines are so cultivated as to receive the full combination of natural influences mentioned, produce wine; others will. We may call any liquid which is a pleasant beverage "wine," if we will, but that does not make it so. Corn juice will make such a drink. Sorghum juice will, maple sap will, and so will birch sap, rhubarb juice with sugar added, sugar with almost any addition you please, etc., etc. Wine, properly speaking, however, is the fermented juice of the *grape*, which may be preserved in bottles or barrels without injurious change for any desirable length of time. Water and sugar in due proportions added to grape juice before the fermentation takes place, are, we believe, not regarded *legally* as adulterations in European countries, for the addition is innocent and it only puts the buyer's knowledge to test—a tax he pays for not knowing the difference. All other additions are adulterations and illegal. Still, water and sugar are adulterations, unless we admit that the miracle of converting water into wine is constantly performed in our day.

The grapes must hang until perfectly ripe, and the sun allowed to shine on the leaves. Pick in flat baskets, so that none will be bruised. They get no injury if not broken, by lying spread out on sheets in a dry atmosphere a few days, or until a large quantity is gathered. Then pick out every unripe, decayed, hard, or broken berry, handling them cluster by cluster. They are next to be mashed, which is conveniently done in some of the neat little mills made for the purpose, which will not crush the seeds, or by the hands. This mashing operation must be done with care not to crush seeds, and so that every grape is broken. It is sometimes customary to crush with pounders in a barrel, but this is not so thorough or neat a plan, and seeds are often broken. When the grapes are mashed as described, they may be thrown upon a large stout linen cloth in a tub from which the *must* or juice may be drawn off, and then tied up and subjected to *gentle* pressure; afterwards placed upon a cheese press and a *moderate* pressure only applied. The result will be the securing of the sweetest and best part of the juice. The same may be better done upon a regular wine press if one is at hand. This *must* which is thus first secured should be put directly into tight barrels filled within 6 inches of the bung, moved to the cellar and the bung-holes covered with pieces of cloth.

Meanwhile we return to the half-pressed pulp and skins in the press. Transfer this to tubs or barrels; add as much water as you have abstracted juice, and perhaps a little more, together with a pound to a pound and-a-half of sugar to the gallon of the mixture. Cover it close with dampened blankets so that no air can get to it, and suffer it to ferment, for several days, the slower the better, (hence the cooler it is the better, provided fermentation is not checked); occasionally stir it without letting the air have access. After the fermentation has gone on in this way from 4 to 6 days, draw it off into barrels, transferring the pulp to the press, and remove all the *must*. This is barreled in the way already described, only the barrels may be filled a little fuller.

There must always be provided in barrels, kegs or jugs, according to the quantity of wine undergoing fermentation, enough more to fill up all the barrels to the bung when the fermentation is over or nearly so—and this must be subjected to precisely the same influences as that to which it is to be added.

After the first brisk fermentation is over, and an application of the ear to the bung-hole only detects a slight crackling effervescence, the barrels may be filled full and a bung inserted having the same contrivance described and figured in an article on cider—a glass or block tin tube bent and dipping under water in a cup. This effectually shuts off the air while the carbonic acid gas escapes bubbling up through the water.

The more uniform the temperature at which the fermentation of wine proceeds the better the result; a cool cellar which is not wet and musty, but has only that moisture which is natural to cool but well-ventilated places in warm weather, is subject to less variation of temperature than any other place we can control, being cool in Summer and warm in Winter. Frost should not enter it, and a good ventilation should be ever maintained, because where wine is fermenting much carbonic acid gas is set free, which might be fatal to persons entering.

Some time in the early part of Winter it will be noticed the bubbling from the tube in the bung has entirely ceased, even when the barrel is slightly jarred. Then remove the tube and bung it up tight. When warm weather comes (or at the time of the blooming of the vine) another fermentation will come on, which will be of short duration. Some persons leave the wine on the lees (or sediment) to undergo this fermentation, and do not rack it off (transfer it to other barrels) before the second Winter, but it is generally considered best to draw it off into other barrels in February or March the first year. The hole is bored some inches above the bottom of the barrel so that the lees may not be disturbed. The wine should run perfectly clear and limpid, but if it be turbid after transferring, add a few ounces (3 to 5) of Cooper's isinglass dissolved in hot water to a pailful of the wine, and pour this into the barrel, which, when filled, bung up and mix by rolling it about; let it stand perfectly still a few weeks, when it may be examined, and if clear, drawn off into barrels or bottles. Wine left upon the lees undergoes a much more violent Summer fermentation than

otherwise; much of the sugar in the wine will be converted into alcohol and the flavor injured. In racking off into barrels or bottles the wine must be perfectly clear, and to secure a freedom from specks or foreign substances, it is well sometimes to filter it through a flannel, through which it will run very freely. Wine is better if *in a good cellar*, left to "ripen" in the wood, and not bottled before it is two years old.

It seems hardly necessary to reiterate the absolute necessity for perfect cleanliness in all parts of the operations we have described. The vessels, implements, press, mill, etc., must all be clean. The barrels must have been thoroughly washed and fumigated with sulphur *every time* before they are used. Thus alone can sweet, pure wine be produced.

The philosophy of fermentation we can not discuss at the present time, save only to say: The juice of the grape contains water, sugar, mucilage, some fermentative matters, tartaric acid in the form of tartar, and other free acid, besides those peculiar etherial principles which give the flavor both before and after the fermentation. The principal change which takes place when the juice is exposed to the air is, the commencement of the conversion of the sugar into alcohol and carbonic acid. A portion of the sugar is thus destroyed, spirit is left in the fluid, the carbonic acid escapes in bubbles which make the effervescence (the working,) and certain other changes take place also affecting the flavor. After vinous fermentation commences, it goes on without access of air, and but a very slight contact with the air is sufficient to start it. It depends upon a change which takes place in the nitrogenous or albuminous principles of the fruit, and these, originally in solution, become insoluble, at first floating in the fluid, rendering it turbid, and finally settling as *lees* to the bottom.

How to Make the Best Cider.

Apple juice, tolerably pure, put into barrels with the bungs out, and a bottle neck, or a wisp of straw tucked into the bung-hole, and set in the shade somewhere, makes first, sweet cider, then cider, next hard cider, and finally, vinegar, without much care. When, however, the juice of ripe, rich apples, free from decay, leaves, dirt, and water, is strained into clean barrels, set in a cool cellar, and racked off when the fermentation has nearly ceased, and the cider is nearly clear, a very different article is produced, having a fragrance and purity entirely wanting in the common article. The slight vinegary taste of hard cider is also wanting, and the "hardness" is of the same quality as the dryness of the acid, or dry wines. Cider thus made is very properly called by our German friends *Apfel Wein*.

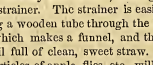
It is a mistake to suppose that early Autumn apples will not make good cider, for that of some varieties is remarkably high-toned. It is seldom perhaps that there is enough of these early apples to make a large quantity of cider, and this is probably the reason why they are neglected; and on account of the neglect, the stigma attaches to them that they are good for nothing. A hand-press is an exceedingly convenient thing upon a farm, particularly such an one as may be used equally well for apples, pears, currants, blackberries, and grapes; and by it a great deal of fruit may be made valuable, which would otherwise be lost. One mill will answer for grinding apples for several presses.

Though the cider made from a mixture of several kinds of apples is very good, if well made, it is much better, if practicable, to keep the juice of different apples separate. In this case the delicate and distinctive flavors of the fruits are retained very agreeably in the cider.

The most scrupulous cleanliness must obtain from first to last. First, the barrels into which the cider is to be placed must be thoroughly washed out and fumigated with sulphur, which is done, after preparing strips of cotton-cloth by dipping them in melted sulphur, by setting them on fire, putting them into the still moist barrel, and bunging it up so that the sulphured rag shall be held by the bung. The mill and press, tubs, funnel, and dippers being also well cleansed, the apples are looked over, decayed ones thrown out, the dirt rubbed off, and they are then ground to a fine pulp.

The common way of laying up a cheese with wet straw has several disadvantages, particularly the necessary use of water to wet the straw, which is equivalent to an addition of water to the juice; then, too, the straw always retains much of the juice. The small presses alluded to, which work without straw, yield a better article of cider. To judge of the quality of cider an apple will make, it is best to try an experiment, grinding a small quantity, letting the pomace stand half a day, stirring it occasionally, and then pressing it. The difference in the color and richness of flavor, and of sweetness, is quite remarkable. Sweet apples, though containing more sugar, are often watery and deficient in flavor, while many sub-acid, or even sour apples, contain as much sugar, and make a much richer cider. The juice, when first pressed, should be syrupy, clear, and the darker colored the better. Apples vary also greatly in the quantity of cider they will make; of many kinds no more than eight bushels will make a barrel of cider, while of some of the richer, finer kinds it will take twelve bushels or more.

It is poor policy to grind and press at once. A bruised apple gains in sweetness, by some chemical change which takes place—and so the pomace should lie several hours to sweeten in this way; and besides, it should be stirred up occasionally to let the air get to it, so as to impart a better color. The dark red color is very desirable, and can not be gained in any other way, and at the same time there is a positive gain in sweetness and richness to the cider.



BUNG-HOLE CLOSED BY A WATER-VALVE.

As the juice runs from the press, it is best received directly into barrels, flowing through a straw strainer. The strainer is easily made by putting a wooden tube through the bottom of a pail, which makes a funnel, and then stuffing the pail full of clean, sweet straw. Almost all the particles of apple, flies, etc., will be strained out, and a clear liquid alone will pass through. The barrels, large or small, are filled full, bunged up and moved to a cool cellar, where the bungs are removed and the cider left to ferment.

The fermentation goes on quite rapidly, and a considerable portion of scum overflows and is thus removed. When the active fermentation and frothing cease, and the bubbles crackle as they rise to the surface and break, the bung-hole should be closed by a large cork, (see figure) through which a glass or leaden tube, bent twice at right angles, is thrust, which rises from the bung and dips below water in some convenient small vessel, through which tube this gas will escape, but air can not enter. When the fermentation is over, and no more bubbling at the end of this tube occurs, and the cider is clear, draw it off into clean, fumigated barrels, bung up tight, and keep in the coolest place.

Fall Butter.

The time of the year when that temperature prevails at which milk neither freezes nor quickly sours, at which cream rises perfectly, and when it requires least care to have the cream at the best temperature for churning, is the best for butter-making. We have these conditions both in Spring and Fall. In the Spring the cows are in full milk, the cares of the dairy and household are multifarious, and the butter, if made in quantity, must be marketed at once or kept through the Summer, and unfortunately not one in a thousand can make Spring butter that will keep well. Autumn is therefore the time of all others when most and the best butter is made.

The important things in butter making are to secure all the cream, to keep it clean, to churn it before it has stood too long, to separate the buttermilk thoroughly from the butter, to work the salt in uniformly, and to do all this without touching it with the hands.

If the milk is carried half a mile and stands half an hour before it is strained into pans, you will certainly lose butter, for the cream will not rise so well. Let the distance that the milk is brought, and the delay before straining it into pans where it will not be moved, be as short as possible. There are no better pans than the common tin pans in use in this country, unless it be some of those forms which allow of the milk being drawn off from the bottom, leaving the cream undisturbed, and, as far as possible, free from milk.

After standing 36 hours the cream will have risen, and if the weather is not too cold it will form quite a firm film upon the surface, which may be removed without taking up an appreciable quantity of milk. This is very desirable, for the cheesy portions of the milk should all be left behind, so far as possible. The cream is best put into stone-ware jars, and kept cool and clean. It is a mistaken notion that cream should be sweet to make the best butter. It must, however, be observed that cream attracts odors and flavors with astonishing facility, so much that the butter will often taste distinctly of articles which were cooking near the dairy at the time the milk was put to stand for cream. This facility to acquire unpleasant odors and flavors will account for a vast deal of ill-flavored butter, which occurs to the disappointment of those who take a great deal of pains, but overlook or are ignorant of this important fact.

The cream should be stirred whenever it is necessary to keep it long in the pot or jar, so that it shall have a uniform consistency and be uniformly exposed to the influences of the atmosphere. After the cream has acquired a slight degree of acidity the sooner it is churned the better.

The thermometer churn is the best we know of; indeed the only really philosophical churn is one which enables us to regulate accurately the temperature of the cream. Modes of agitation, etc., however important, are of a secondary consideration. Cream should be of a temperature not below 55° Fahrenheit, when the churning begins, nor should it be much above that, for the heat increases as the churning proceeds, and when the butter has come it will be near 60°, and ought not to be above 65° on any account. When the butter has come, the churn should be opened and the sides, top and all parts where cream or butter may collect scraped down. After "gathering," the buttermilk should be drawn off and, according to one process, the butter washed—as much spring water at 60° being put in as there was milk. When this is churned in contact with the butter for a minute or two, it is drawn off and more added. Two or three washings like this will free the butter from buttermilk so effectually that after it is thoroughly

worked with wooden ladles or "spatters" to get the water out with the last traces of buttermilk, the salt may be worked in and the butter considered made, except what working and compacting it gets in balling up, at which time every drop of moisture that can be extracted is clear gain. The hand should never touch the cream or the butter from first to last. If specks be seen, remove them with the point of a knife, or a stick made for the purpose. The dairy-woman should educate her own mind to feel that though she knows her own hands are perfectly clean, and that they have not touched her head or her clothes, or any thing else, still the handling or touching the butter with bare hands is unworthy a good dairy-woman, and must never be done.

The vessels and implements used in butter-making should not only be clean, but they should be scalded and then rinsed off in cold water every time just before they are used. The best table for working butter on is one of marble, with a groove all round, an inch and a half from the edge. Beach is the best wood for the ladles and "spatters." A common pastry rolling pin, or one that has shallow longitudinal flutings in it, is a capital thing to work butter with; and a soft sponge covered with a fine linen cloth, kept constantly wet and clean by dipping it in cold, pure water, and wringing it out, is excellent to take up the buttermilk which is brought to light by the rolling. This is a very neat, expeditious and easy process.

Well worked butter does not require much salt; half an ounce to the pound is enough for that which is to be consumed at once or marketed, unless the market demands a salter article, and for the real butter lover no salt at all is decidedly preferable. Butter to be packed in firkins requires more salt, and should be worked again after salting, which reduces the quantity somewhat, and should finally contain not more than one ounce of salt to the pound. The firkins should be prepared by first tightening the hoops, then filling with boiling hot water, and letting them soak half a day, and repeating the operation, and finally, after they have become partially dry, scalding them out with hot brine and letting them dry without wiping. This takes out the taste of the wood. There is no object in using large quantities of salt between the layers of butter and upon the top, but on the contrary it is injurious. Every part of the firkin should be filled with butter, so that no air can penetrate; a thin film of fine salt, however, should line the sides and bottom, and cover the top.

Onions in a Hygienic Point of View.

In a medicinal point of view, the garden onion is of more importance than any other of our esculent vegetables. It is a powerful diuretic, and is said as such to have been successfully used as a specific in dropsy, gout, gravel, lumbago, and generally in all affections of the kidneys and urinary organs. As an instance of its efficacy in dropsy, we shall relate a circumstance which came within our own observation a few years since. We were traveling through one of the middle departments of France in company with a very eminent connsellor, and member of the Parisian Bar, who had turned his attention to discovering the various medicinal properties of simples, in illustration of a favorite theory of his, that all the ailments which afflict mankind may be removed by remedies from the vegetable kingdom, to the utter exclusion of all mineral substances.

One day we stopped and claimed the privileges of hospitality at a beautiful "chateau" belonging to a distant relative of our friend. We were most kindly received by the lord of the manslon, a fine looking middle aged man, who, with tears in his eyes, informed us that his lady, whom our friend described as a most gentle, kind-hearted, and noble-minded dame, was dying of the dropsy, all the medical men in the neighborhood having stated that nothing more could be done for her. "That remains to be seen," said our friend hastily, "I must see her forthwith," and he proceeded to her bedroom, dragging us with him—a circumstance which will create no surprise in those acquainted with the manners of the French. The lady was alarmingly ill, and had swollen to an enormous size; she had been tapped once before, but on the present occasion had obstinately refused such a mode of relief. The Parisian lawyer, nothing daunted, called for some *white onions*. Having peeled a sufficient quantity, he filled with them a pipkin, or coarse earthen mug, holding about three pints. Having stuffed in as many peeled onions as the vessel would contain, he filled this with cold water, covered it, and set it in the midst of the warm embers, where the water would simmer with very little ebullition. He let the onions stew until they were reduced to a pap, and the water to half of the original quantity—a process which required three or four hours, as the vessel was kept closely covered, and the fire slow. He strained the liquor through a linen bag, carefully expressing every drop of juice from the onion pulp which had melted in the liquor. Having extracted this latter, he carefully weighed it, and then, gently over the fire, but without boiling, dissolved in it its own weight of coarse brown sugar. Of this syrup he gave his patient two tablespoonfuls every two hours, a fresh quantity being made so as to keep up a constant supply. In a day or two the lady felt better, and in about six weeks, during which time we remained at the chateau as guests, she was able to walk with us about the grounds. We had occasion to visit our kind host about six months after our former visit, and found his lady enjoying excellent health, and valuing her cousin's onion syrup as a specific for all the complaints "that flesh is heir to."—*Mag. Domestic Economy*, (Eng).

For the American Agriculturist.

About Pickles, etc.

Allow me to add to your list of "Material for Pickles," and your recipes for pickling, one or two which are very palatable, and entirely economical:

OTHER TOMATO PICKLES.

Use the multitudes of tomatoes of all sizes, which remain green on the vines when Jack Frost is drawing near, in this manner: Chop them to about the size of dice, place them in colanders with a little salt, and let them drain one day; then put them in jars, and cover them with hot vinegar well spiced, and set them away. They require no further care, and have very much the relish of mangoes.

A kind of *mango* can be made of the very large tomatoes which remain green. Cut out with the stem enough of the tomato to permit the scooping out of the seeds, and then fill with chopped cabbage, chopped onions, with mustard seed and spices, or any thing which is preferred. Secure the piece cut out, as you would in making melon mangoes, and then throw the tomatoes with your other pickles into vinegar.

BOILED QUINCES FOR THE DESSERT.

You furnish also a recipe for "baked quinces." I assure you that quinces not pared, simply boiled in fair water till tender, and eaten with butter and sugar, like dumplings, form a delicious dessert for the dinner table. They should be taken upon the plate and crushed with the fork, and simply buttered and sugared. As to beauty, nothing can surpass them; they retain their form, and are as bright as a dish of oranges. LETTY ERMIN.

Preserving Peaches.

It may be done either with or without sugar, with much or with little. The question may well be considered, will sugar be cheaper next Winter and Spring than now, and we may act accordingly. Pecl and cut in quarters, put them directly into the bottles, with a *very* little water, put the bottles in a wash-boller, or similar vessel, filled with water to within two inches of the tops of the jars; bring the water to a boil, and boil it 15 minutes. Have prepared a syrup with 1 pound of sugar to a pint of water, or 1 pound to 2 quarts, just as you choose—the former usually preferable—pour this, boiling hot, into the bottles, as soon as they are removed from the water, and close them immediately, as directed on page 182, *Agriculturist* for June, 1862.

Hints About Cooking, etc.

Pea Soup.—People who despise soups had better try either of the following recipes. The first is an old family recipe; the other is from Soyer, who has furnished *the people* so many good recipes.

Split Pea Soup.—Take a quart of peas; soak the peas over night in a quart of water; in the morning boil them an hour in this water; 10 minutes before the hour expires, put in a teaspoonful of saleratus; at the expiration of the hour, change them to fresh water; put in a pound of salt pork, and boil three or four hours. Serve with a slice or two of bread, cut in small cubes and fried brown.

Cheap Pea Soup.—Put into the iron pot two ounces of drippings, one quarter of a pound of bacon, cut into dice, two good onions sliced; fry them gently until brownish, then add one large or two small turnips, the same of carrots, one leek, and one head of celery, all cut thin and slanting (if all these can not be obtained, use any of them, but about the same amount); fry for ten minutes more, and then add seven quarts of water; boil up, and add one pound and a half of split peas; simmer for two or three hours, until reduced to a pulp, which depends on the quality of the peas; then add two tablespoonfuls of salt, one of sugar, one of dried mint; mix half a pound of flour smooth in a pint of water, stir it well, pour in the soup, boil thirty minutes, and serve.

Green Pickles.—To give pickles a lively green color, it is recommended to put grape leaves into the vinegar—a very simple way if it is effective.

Corn Oysters.—Half a dozen ears of boiled corn; three eggs; a tablespoonful and a-half of flour. Beat the yolks very thick; cut the corn off the cob; season it with pepper and salt; mix it with the yolks, and add the flour. Whisk the whites to a stiff froth; stir them in with the corn and yolks; put a dessert spoonful at a time in a pan of hot butter, and fry to a light brown on both sides.

Biscuit Fritters.—Take some light biscuits or rusks; split them in halves; saturate them with custard made with six eggs to a quart of milk, omitting sugar (if the cakes are sweet); then fry them in hot lard to a light brown, and eat with wine sauce.

To Candy Fruits.—Take one pound of the best loaf sugar; dip each lump into a bowl of water, and put the sugar into your preserving kettle. Boil it down and skim it until perfectly clear, and in a candying state. When sufficiently boiled, have ready the fruits you wish to preserve. Large white grapes, oranges separated into small pieces, or preserved fruits, taken out of their syrup and dried, are very nice. Dip the fruits into the prepared sugar while it is hot; put them in a cold place; they soon become hard.

Pineapple Jam.—Pare the pineapples, and grate or shred them fine with a silver fork. To every 5 pounds of fruit add 3 pounds of loaf sugar. Put the whole on the fire, and boil it three-quarters of an hour, stirring it all the while. When cold, put it in jars with brandy paper on the top, and tie them close, or paste paper over, and keep in a dry, cool place.

Sweet Apples Baked and Dried.—Bake as for the table; then dry by fire heat. The old-fashioned, large brick oven is the best place. When wanted for the table they may be soaked in water and heated, and finally the water dried away. The apples return to very nearly the condition of fresh baked apples. If they are stewed in a syrup they make a rich sauce, far preferable to that of the common dried apples. A FARMER'S WIFE.
Licking Co., Ohio.

To Destroy Moths in Carpets.—Remove the furniture and whip the edges of the carpet repeatedly with a strong whip, (a good rawhide.) A good housekeeper writes that she has tried this method with success.

RAMBLES AMONG THE MOUNTAINS

Engraved for the American Agriculturist.

Some of our young readers live by the Sea-shore, where the great waves of the Atlantic, or of the Pacific, come rolling in, thundering upon the beach with a hollow, rumbling sound, which at a little distance fills the ear with a strange, solemn melody. Many others see the waving grain and grass of the gently rolling or level prairies, which, like the ocean, stretch for miles away, so far as the eye can reach—no rocks, no hills, no mountains and forests; but beautiful corn and fine herds of cattle and sheep cover the prairies. Others live upon the mountains, where huge rocky bluffs and peaks stand up and take the brunt of the storms and tempest, or cool the hot winds of summer-time. Here the dew falls early, and the breezes blow cool, and here grow sweet, short grasses whereon the sheep and goats thrive so well, and fed upon which the cows give such rich milk and sweet butter. We have here a picture of a wild mountain scene; and in the hot days of the past month we think many of our city readers would gladly have changed places with this little girl in her rambles among the wild flowers, the rocks and the flocks of the cool mountains.

The Editor with his Young Readers.

LETTERS FROM MR. JUDD.... NO. II.

LONDON, *England, July 9th*, 1862.

DEAR YOUNG READERS:—I am just leaving this City for a trip on the Continent, but will send you a few notes, which must be dispatched thus early, in order to cross the Atlantic in time for the inside sheet of the September *Agriculturist*.—My last letter closed up at Belfast, Ireland. From there we went by steamboat about 160 miles, passing up the river Clyde, to Glasgow, Scotland. Along this river are very extensive ship-yards, where iron-clad and other vessels are being built. At one point we saw the west end of "*Antonine' Wall*," or "Graham's Dyke," a great embankment built clear across Scotland when the Romans occupied England, many hundreds of years ago. Neither the Romans nor the English were ever able to penetrate to the extreme north of Scotland. The Scotch people boast, and I believe truly, that their country has never been entirely occupied or conquered by any other people. No other European nation can make a similar boast. (The union of Scotland and England was brought about by marriage and inheritance among the Royal families.)—Glasgow is a fine city. The Clyde has been *made* navigable up to this city by digging out and straightening the channels, and building up artificial banks. The "*Broomielaw*" or harbor, is an artificial basin, upwards of a mile in length, and more than 400 feet wide, and contains over *fifty acres* of water in which ships float. Glasgow contains about 400,000 inhabitants, or about 450,000 including the suburbs. The illustrious James Watt began his memorable experiments upon steam engines at Glasgow, in 1763, or 100 years ago. The first steamboat successfully run in Europe plied between Glasgow and Greenock, a town at the mouth of the Clyde, commencing her trip Jan. 18, 1812, the first year of our last war with England. The engine of this little steamboat, called the "Comet," was only 3-horse-power. (Please get out your maps and hunt up the Clyde River and Firth, and note the location of Ayr, and of Edinburgh.) Glasgow is largely engaged in commerce with all parts of the world. The city is well laid out, cleanly, and the houses high, in good taste, and all of light-colored stone.

I could not resist the desire to visit the birth place of Robert Burns, near the village of Ayr, 40 miles southwest of Glasgow. When I was a boy upon the old farm, several Scotch laborers were employed, and they often sat for hours in the evening playing the flute and singing "Bonny Doon," the "Banks of Ayr," etc. The big tears coursed down their cheeks as they sung and talked of their loved native land. The little boy who then listened to them and even wept with them, little dreamed that more than 30 years afterwards he would ramble along the banks of the Ayr and Doon rivers, and enter the low, straw-thatched cottage where the poet Burns was born, visit the "Auld Kirk," and the tomb of the poet, and take a run over "Tam O'Shanter's" Bridge. But such was my privilege on June 14th, 1862, and the scenes will never be forgotten, more than will the earlier boyhood days and the kindly Scotchmen who sung to me those plaintive songs. The country around Ayr, and between there and Glasgow, is finely cultivated, resembling some of the best agricultural regions in our own country.

EDINBURGH, (pronounced "Ed-in-bo-ro") is a city of nearly 200,000 inhabitants, situated on or near the Firth (bay) of Forth. In the southeast part of Scotland. Taken altogether, it is the finest city I have ever seen. A high hill near the center of the city is capped by a large, old castle, strongly built, and only to be entered by means of a drawbridge over a deep ditch. Along the south of this is the old city; the streets narrow, the stone houses many stories high. A high wall, yet partly remaining, enclosed the ancient city, and the space being limited the houses were built very high, to save ground room. Many of them run up 10 to 12 stories; one or more families occupy each story.——The new city extends all round outside of the old walls, but mainly northward, running to Leith, the harbor of the city. The streets of the new city are wide, very clean, and the houses in excellent (modern) style. There are many buildings and objects of interest, but I can not stop to describe them particularly, as I have *many* notes of other interesting localities to draw upon. It is worth a pilgrimage to go upon the top of "Arthur's Seat," a very high hill a little way southeast of Edinburgh, and look down upon the city, the Firth, the beautiful Lothian Farms for dozens of miles to the South, etc. From its summit we can also see the Grampian Hills far north of the Firth of Forth, also Ben Lomond away northwest of Glasgow on the western coast of Scotland.

Long Days.—In my note-book is this memorandum. "Edinburgh, June 14th, 10¾ P. M. I am writing by *daylight!* In these high latitudes (56° North) the sun shines round the northern side of the earth, so to speak, and we have daylight bright enough to read from 2¾ A. M., to 10¼ P. M., at this season of the year. A dozen degrees further north, the sun shines clear over the North Pole at all hours, affording perpetual day when the sun is at the 'Summer Solstice.' Even here in London (lat. 51½°), it is light enough to read after 9 o'clock P. M. (July 9th)."

EDINBURGH TO LONDON.

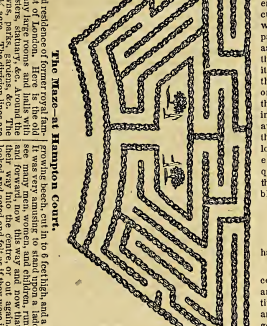
Size of England.—In all the maps used in our own country, England occupies so small a place in an upper corner, that we are accustomed from early childhood to think of it as a diminutive island. I suspect that most people insensibly allot about as much space to some of our smaller States as they do to all of England, owing to the little space it occupies on *our* common maps. This is a false impression. Such a ride as I took, of 400 *miles* (or just 300¾ miles) through the country from Edinburgh to London, is well calculated to do away with such early geographical impressions. Our route, of course, was not a straight line, yet the most direct one by railway. We first went southeast 57 miles to Berwick, thence south 67 miles to New-Castle-upon-Tyne, thence 94 miles to York, then 115 miles to Peterboro, and 76 miles to London, which is still about 75 miles North of the English Channel.——England alone contains 50,922 square miles. The Great Empire State (New-York) contains 50,519 square miles—a difference of barely 403 square miles. Wales, which is really a part of England, contains 7,398 square miles, or about the same as the State of Massachusetts. Ireland contains 32,508 square miles, or nearly as much as the State of Indiana. Scotland (including 500 miles in its islands) contains 31,324 square miles, or nearly as much as the State of Maine. The total area of Great Britain and Ireland is therefore **122,152** square miles, or about the same as the combined States of New-York, Maine, Massachusetts, and Indiana, or a little more than the whole of New-England, New-York, and New-Jersey.——(The entire territory of the United States is 3,200,000 square miles, or *twenty-six* times that of all Great Britain.) The population of Great Britain is at present not far from Thirty Millions, or a little less than half of the United States. With a territory so large, and so highly cultivated, it is not so much to be wondered at, that in very plenteous years Great Britain should produce almost food enough to sustain her own population, though in ordinary years from fifty to seventy-five million bushels of grain are imported. If all the great landed estates, the wooded hunting grounds, and the imperfectly cultivated lands of Ireland were under the best tillage, and the grain consumed in producing *beer* were used as food, Great Britain would readily feed her whole population from her own soil. Taken as a whole, the *proportion* of good soil is no greater in Great Britain than in the United States. What will be the feeding capacity of *our* entire country when it is all brought into the highest and most productive cultivation! You, boys, are to have a hand in the tillage of our broad territory. Every acre of our good soils is a mine of wealth. You should prepare yourselves by study, by reading, and by observation, to enter well upon your future work; you will soon be *directors* of our farming and other pursuits.

The whole eastern part of the country, from Edinburgh to London, is one vast cultivated field, with the exception of here and there a reserved hunting forest, a few hilly spots, some barren heaths, and a few few swampy bogs. In some places, as around New-Castle, the fields are much broken up by the openings to the coal beds we know underlie the surface. Scarcely a wooden fence is to be seen, and very few iron ones. The farms and fields are divided by green hawthorn hedges. (The same thing is seen in Ireland, and more or less in Scotland.) These "living fences" add much to the beauty of the landscape in Summer, yet for profit and convenience these hedges are far too abundant. We shall not find them on the Continent of Europe. They occupy much ground, and are the fruitful nests of foul weeds and vermin. We shall probably come to hedges in America, if our climate does not prove too hot and dry for them; but we shall scarcely commit the error of cutting up our fields into plots of one to five acres, by hedges and ditches. English farmers are fast diminishing the division lines, even where the large estates are being cut up into small freehold farms. (Much of the soil of England is owned by great land holders who let it to tenants by the acre. We conversed with one farmer who cultivates 2,500 acres, for which he pays an annual rent of $3 to $16 an acre

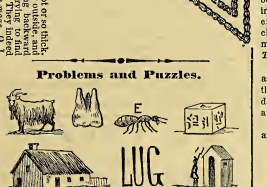
My letter is already too long, to leave room to say any thing about the city of London, the great International Exhibition, &c. I will enclose in this a sketch of a place I visited last week, called

The Maze--at Hampton Court.

—Hampton Court is the old residence of former royal families. It is situated on the River Thames, about 12 miles from London. Here is the old Palace, and the Parks, and Gardens, and Pleasure Grounds, filled with statuary and paintings by the great masters. Among the latter is the celebrated cartoons of Raphael. The Maze, or Labyrinth, contains perhaps 1 acre. The division lines are formed by a hedge of evergreen trees, about 6 feet high, and so close and thick that it is impossible to see through them. The hedge is trimmed with shears, and looks as neat and even as if it were a mere wall. Of course, the only way to find the centre is to find the way. The way is not difficult, as there is but one path, and that winds around and around, and forward, now this way and now that, trying to find the way. Many persons, however, get lost in the Maze, and are unable to find the way out for hours. Sometimes they call for help, and are assisted out by the gardeners, who are stationed at the entrance for that purpose. Many persons, however, prefer to get lost, and wander about for hours, rather than call for help. The engraving below represents a portion of the Maze, with a person in the centre, who has evidently got lost, and is looking around for the way out. The trees are about 20 feet high, and a foot or so thick. The hedge is 6 feet high, and 6 feet thick. The ground is level, and the trees grow in a straight line. The engraving below represents a portion of the Maze, with a person in the centre, who has evidently got lost, and is looking around for the way out. The trees are about 20 feet high, and a foot or so thick. The hedge is 6 feet high, and 6 feet or so thick.

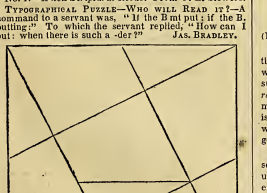


Problems and Puzzles.



No. 17—*A new Scriptural Rebus.* From C. L. Siewers.

TYPOGRAPHICAL PUZZLE—WHO WILL READ IT?—A command to a servant was, "If the B mt put; if the B. putting:" To which the servant replied, "How can I put: when there is such a -der?" JAS. BRADLEY.



Answer to Block Puzzle No. 16 (page 249, August):

Answer to the Rebus No. 12 (page 217, July) :—"Oft repeated sin deadens conscience."

Answer to the Rebus No. 13 (page 217, July) :—"A Cat in gloves catches no mice," thus;—Cat inn gloves cat cheese no mice *(none in the trap).*

Answer to the Rebus No. 15: (page 249, August)—"A people intent on being ruled by a king, need not complain if monarchs arrogate their ability to overrule opinions," thus:——A *people in tent on bee* in G ruled by *a king have* d *knot* com *play* n if m on *arcs arrow gate* their *a bill* tly 2 over rule *o pinions.*

The Quill and Card Experiment.

One of the prettiest of those little philosophical experiments which everybody may make, is the following: Take two pieces of light card or stiff paper, and cut them out circular and exactly of a size—about 3 inches or less in diameter; in the middle of one of them make a hole and insert a goose quill or other similar tube. The end of the quill must be cut off square and even with the card. It may be pasted or gummed so as to stick—now blow through the quill holding it in the mouth, and place the other card against the one attached to the quill: the result will be that, instead of being blown away it will be drawn up tightly to the quill-card, and the harder you blow the tighter it will stick. The philosophy of this is very *evident* and simple to explain, however difficult to demonstrate. The cut shows how the quill is inserted. Let some of our young readers make the experiment and see if they can tell why they can not blow the card away.

A Constant Exhibition.

The Tables at the Office of the *American Agriculturist* have constantly during the season novel and interesting

FRUITS, FLOWERS, GRAINS, VEGETABLES, ETC.,

contributed by SUBSCRIBERS, NURSERYMEN, GARDENERS and others, and almost uniformly present a very attractive and instructive exhibition. The daily show of fruits and flowers is now large and interesting. It has been suggested by horticultural gentlemen of this city and neighborhood that we have a WEEKLY EXHIBITION, appointing a *certain day* whereon our friends may come with the expectation of seeing one another, and talking over their choice fruits, etc. This is a good idea, and while we are most happy to receive contributions to our *Exhibition Tables* EVERY DAY, we name

THURSDAY OF EACH WEEK

as a convenient day for a special show of FRUITS during this and the following two or three months; on which days we shall be especially happy to see our friends, who are at all times most heartily welcome.

Our tables are spacious, and the Office large and airy, and the best care will be taken of the articles contributed.

PREMIUM LIST,

For 1863---Volume XXII.

New Subscribers get the Rest of this Year Without Charge. (*See page* 288.)

Good Pay to Voluntary Agents who attend to Collecting and forwarding Clubs of Subscribers to the American Agriculturist.

(Premiums open to all who Desire them.)

Every subscriber is invited to renew his own subscription, and to solicit others to subscribe. But to all those who will take the trouble to collect and forward CLUBS of subscribers, we offer a remuneration in the form of *first-rate* articles, as named below. The pay thus offered is much larger than we could pay in cash, though no article is proposed which is not of the best quality, and fully worth the price asked. (We get these articles on extra good terms *when for premiums.*)

Part of the Premium articles announced this month are selected from the best prizes last year, those which gave universal satisfaction. They are such as will *pay* for the effort to obtain them.

☞ WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ We offer nothing *for competition.* Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing; every one knows just what he or she is working for.

☞ *We make no distinction between new and old subscribers,* but it is expected that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞ Every person collecting names for premiums, should send two copies of each list of names—one of them marked "For Premiums," and also with the name of the sender.

☞ Every person collecting names for premiums, should send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; but if designed for premiums, two copies of each list of names should be sent—one of them marked at the top "For Premiums," and also with the name of the sender.

☞ The premiums are offered for subscribers for Volume XXII (1863), *whenever received.* Canvassers will have time for completing their lists, but the premium will be paid as soon as any club is made up—if duplicate lists are sent.

☞ Any person who has commenced sending in names at 80c. and finally falls to get the higher number of names, can fall back upon the smaller number, by remitting the 20 cents extra on each of the smaller number of names required.

☞ Clubs need not be all confined to one Post Office.

Table of Premiums for 1863.

Names of Premium Articles.	Price of Premium.	Names at $1 each.	Names at 80c. each
1—Goop BOOKS—*See terms below*.....			
2—Best Family Clothes Wringer.....	$7 50	18	37
3—Nonpareil Washing Machine.....	$14 00	30	70
4—Sewing Machine, (Wheeler & Wilson).....	$45 00	90	139
5—Sewing Machine, (Wilcox & Gibbs).....	$50 00	96	168
6—Aneroid Barometer.....	$7 50	19	44
7—The Aquarium.....	$10 00	25	47
8—Five octave Melodeon (best).....	$75 00	125	257
9—Six Octave Melodeon (best).....	$90 00	194	382
10—Four Octave Melodeon (best).....	$45 00	90	190
11—New Cyclopedia, 16 volumes.....	$48 00	96	140
12—Worcester's *Unabridged* Dictionary.....	$5 00	10	20
13—Six back Volumes Agriculturist,	$6 72	19	35
14—Five do do do	$5 60	16	30
15—Four do do do	$4 48	13	26
16—Three do do do	$3 36	10	20
17—Two do do do	$2 24	..	15
18—One do do do	$1 12	..	10
19—Jacob's Portfolio Paper File.....	$1 23	..	11
20—Winsor & Newton's Paints.....	$2 50	..	20
21—Osborn & Hodgkinson's Paints.....	$1 50	..	15
22—Premium Cylinder Plow.....	$10 00	50	68
23—Eagle Plow No. 28.....	$8 25	28	62
24—Hay and Straw Cutter (best).....	$8 00	27	58
25—Steel-tooth Cultivator (best).....	$8 00	24	55
26—Family Lard and Wine Press.....	$7 00	24	55

Postpaid.

DESCRIPTION OF THE PREMIUMS.

Premium No. 1—Good Books.

This premium will meet the wants of a great number of persons. On page 285 is a list of 92 books, many of them on topics connected with the Farm, Garden, and Household, and a portion of them the very best published. (See remarks at the head of the list.) Any person sending in 16 or more subscribers, may select any of the books in that list, (page 285,) to the amount of 12½ *cents for each name, at the club price of* 80 *cents, or to the amount of* 33½ *cents for each name, at* $1 *each.* Many farmers' clubs have, during the last year, joined together and obtained a considerable library through these premiums. N. B.—The books will be *delivered* to the recipients (by mail or express, *free of all cost.*

No. 2—Family Clothes-Wringer.

This is a first-rate household implement—a great saver of garments, and a saver of hard work. Every woman knows that wringing by hand is not only the hardest, wrenching work of washing-day, but that the twisting by hand-wringing breaks more of the fibres of the garments than the washing and ordinary wear. With this machine set upon the edge of the wash-tub, the garments are easily and rapidly passed between two India-rubber rollers, the water falling back into the tub, and the garments dropping into a basket, in a drier condition than they can be wrung by hand, and therefore more quickly dried on the line. A child can in a few minutes wring out a tubful of clothes. The machine will save its cost several times in a year, simply in the saving of garments. We have had one of the first machines made in constant use in a family for nearly three years, and it is still as good as new. The machines now manufactured are still better, several improvements having been made. The machine figured, No. 2, is just the thing for family use. It is provided with cogs to move the rollers together, so that it is not possible to tear garments, as is the case with cheaper Wringers not provided with cogs. We present one of these No. 2 Wringers to any person procuring and forwarding 18 subscribers, at $1 each, or 37 at the lowest club price, (80 cents each.)

Premium No. 3—Best Washing Machine.

Many ladies have asked us, for years past, to introduce a good Washing Machine among our Premium articles, but we have uniformly declined doing so, for want of the right kind of machine. We have now, however, found a machine worthy of a place in the premium list, in which we mean to put none but those known to be first-rate articles. The **Nonpareil Washing Machine** we have had in use in our family for nearly a year past, and it has not only driven out half-a-dozen placed there on trial, but has really given excellent satisfaction. It is the only machine, out of twenty we have tried, which the "help" cheerfully use without compulsion. It is a labor-saver and a clothes-saver—two important considerations. (See descriptive cut, and advertisement on page 287.) The clothes are put in, in quantity, and quickly washed by simply turning a crank. The balance-wheel adjusts the force required, so as to make the turning easy. Take it all in all, it is the best Washing Machine we know of, and is worthy of a place in every family. They are of three sizes; we select No. 2, as the best size for common family use. The price of No. 2 is $14. This machine we will present to any one for warding 30 subscribers at the regular price, ($1 each,) or 70 subscribers at the lowest club price, (80 cents.) The machine can be sent to any point as freight, or by express, and will be forwarded, free of all expense, except the freight after leaving the city.

Premium No. 4—Sewing Machine.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person sending them to *Wheeler & Wilson's* best **$45 Sewing Machine,** (including **Hemmer**), new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly *five* years' use in our own family, in connection with other machines. We want no better. The fact that more of the Wheeler & Wilson machines are sold than of all others combined, is perhaps the best testimony in their favor. The terms on which it is offered above, will enable many families to secure one without direct outlay of money. The Premium Machines will be selected new at the manufactory, and will be forwarded, well boxed, with full directions for setting up and using, and with no expense, except for freight, after leaving the city.

Premium No. 5—Sewing Machine.

60 Subscribers at $1 each, (or **98** at 80 cents each,) will entitle the person procuring them to *Wilcox & Gibbs'* **$35 Sewing Machine,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with one thread,) and has several points superior to other machines. It is neat, well made, simple in its operation; and having tested one in our own family for more than two years, we think highly of it, and can recommend it to those who can not afford to buy the higher priced double-thread machines. Most of our neighbors think this machine ahead of all others. Premium 5 will be selected and sent the same as No. 4.

Premium No. 6—Barometer.

19 Subscribers at $1 each, (or **44** at 80 cents each,) will entitle the person getting up the club to one of *Kendall's* **Aneroid Barometers,** (Price $15.) This is a good, portable instrument, and valuable to every person as a weather guide, as well as for scientific purposes. We have had one in use for nearly three years, and find it not only accurate, but an admirable weather prophet. Scarcely a rain storm or gale of wind has occurred, that has not been heralded by our barometer. It will save to any farmer and others many times its cost, as a weather-indicator. These instruments resemble a large watch, 5 inches in diameter, and 2 inches thick. Each one is in a neat leather case, and when sent to a distance, this is packed in cotton, in a wooden box 4¼ by 8 inches, and can go anywhere, by express or otherwise, with perfect safety.

Premium No. 7—The Aquarius.

This is a capital instrument, valuable to have in every house. It is a portable hand force-pump, which any one can catch up at a moment's warning, and throw from a pail or other vessel a steady stream of water upon a fire in a house, or elsewhere. It is supplied with both a jet-pipe and a rose, or sprinkler, and can be used for washing windows, carriages, &c.; for sprinkling trees, plants, destroying insects, &c., &c. With it, it is easy to wash the second and third story windows, and to sprinkle the roof of a house without standing upon the ground. Such an apparatus will often enable a person to so use a bucket or two of water as to extinguish a fire breaking out where it could not be reached by engines from the street. The Aquarius is supplied with suction and injection India-rubber pipes, and with air-chambers to keep up a constant stream. The weight is 8 lbs., and it can be sent anywhere as freight, or by express. We substitute this for the Hydropult, as being cheaper, and quite as good, (Price $10.) We will present an **Aquarius** complete to any one forwarding a club of **22** subscribers at $1 each, (or **47** at 80 cents each.) N. B.—Further particulars can be obtained by sending for a descriptive circular to the manufacturers, W. & B. Douglas, Middletown, Conn.

Premium No. 8—Melodeon.

125 Subscribers at $1 each, (or **237** at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$75 Melodeons** (5 octaves). These Melodeons are of very superior tone and finish. We have ourselves used one for three years past, and it has given the highest satisfaction, and is considered by all who have heard it, as one of the very best. The different priced instruments are of equally good tone—the price varying with the size and style of finish. The size, prices, etc., of these instruments can be learned particularly, by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive circular. The instruments will, as a Premium, only be sent new directly from the factory at Buffalo, ready boxed, and without expense to the recipient, except for freight. Schools and churches can frequently combine their efforts and secure one of these instruments. This has been frequently done. See "N. B." under Premium No. 10.

Premium No. 9—Melodeon.

108 Subscribers at $1 each, (or **183** at 80 cents each) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$60 Melodeons** (4½ octaves.) See No. 8

Premium No. 10—Melodeon.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$50 Melodeons** (4 octaves.) See remarks above. **N. B.**—Higher or lower priced Melodeons will be given for larger lists, in the same proportion.

Premium No. 11—New Cyclopedia—A Splendid and Very Valuable Work.

96 Subscribers at $1 each, (or **140** at 80 cents each,) will entitle the person getting up the club to a set of *Appleton's* **New American Cyclopedia**, now in course of publication, consisting of *sixteen large volumes* of about **770** *pages each. This is a magnificent work for those using a whole library embracing every topic of human knowledge.* Fourteen volumes are now ready, and the remaining two will be furnished as soon as issued. We recommend it to every one, whether they procure it as a premium or not. The work is sold at $5 per volume, or $48 for the entire set. To no better purpose could any one devote the Winter evenings than in raising a club of subscribers to secure this for himself and family. Several schools have received it, through the combined efforts of the scholars in raising clubs of subscribers. Boys have also secured it by their individual efforts.

Premium No. 12—Best Dictionary.

18 Subscribers at $1 each, (or **40** at 80 cts. each,) will entitle the person getting up the club to a copy of the *large Pictorial Unabridged Edition of* **Worcester's Dictionary,** (Price $7.50.) This now stands confessedly the most valuable Standard Dictionary published. It contains **1854** pages of 3 columns each, giving the spelling and pronunciation, with the definitions, of every word in the English Language, and as a source of general information on all subjects, stands next to the Cyclopedia. The Dictionary can be called for at our Office, or be sent by Express or otherwise, to any part of the country.

Premiums Nos. 13 to 18—Back Volumes—A First-rate Library.

These premiums (13 to 18,) will enable any one to secure the previous excellent volumes of the *American Agriculturist*, as far back as Volume XVI. We have stereotype plates and can print any number desired of the English Volumes 16, 17, 18, 19, 20, and 21, and of the German Volumes 18, 19, 20, and 21. These will be sent in clean, new numbers, each volume by itself, with index and contents, **one volume** *at a time, postpaid.* The whole five can be taken together, or one or more copies of any particular volume be selected, as desired. They will be presented as to the table above, viz.: for **30** Subscribers at $1 each, (or 36 at 80 cents each,) we will present **six volumes.** For 16 Subscribers at $1 each, (or 20 at 80 cents each,) we will present **five volumes.**—For **13** Subscribers at $1 each, (or 26 at 80 cents each,) **four volumes.**—For **10** Subscribers at $1 each, (or 20 at 80 cents each,) **three volumes.**—For 7 Subscribers at $1 each, (or 14 at 80 cents each, **two volumes.**—For **10** Subscribers at 80 cents each, **one volume.**—Let every one selecting these premiums be careful to name *just which* back volumes are desired.

Premium No. 19—Best File for Agriculturist.

Jacobs' Portfolio File, made just to fit the *Agriculturist*—the name printed on. This is a leather cover or portfolio, so arranged that successive numbers of the paper can be inserted in a minute, and be properly preserved in book form when ready. When one volume is completed, the sheets can be removed and stitched, and a new volume inserted. A single cover will answer for a dozen successive volumes. It is a very handy and complete file for ready reference. Price $1, and the postage 23 cents. We will forward it, postpaid, to any one sending *eleven* subscribers, at the lowest club price, (80 cents each.)

Premium No. 20—Paints.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Windsor & Newton's* **Water Color Cakes**—consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These Paints are imported from London, and are by all considered the best in the world. They are adapted to the finest work, and will make and appropriate present to any of our younger readers. They will be sent post-paid only where in the United States within 3000 miles.

Premium No. 21—Paints.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an Assortment of *Osborne & Hodgkinson's* **Water Color Paints,** consisting of 24 colors or shades, put up in a neat mahogany case, with brushes, etc. These are of American manufacture, and though not so fine as the above, will answer for ordinary practice by children or beginners, and for common sketching. Sent same as No. 20.

Premiums Nos. 23 to 26.

We have not room left to describe these particularly, this month. The Cylinder Plow was described in this journal last year. It is undoubtedly a great improvement. The Eagle Plow is well known, and so is the Hay and Straw Cutter, and the Steel-toothed Cultivator, one of the most useful implements on the farm. The Lard and Wine Press is a very convenient machine for pressing out lard or tallow, the juice of grapes, currants, berries, &c. For the prices, and subscribers required, see the table above.

Reports on Crops, August 10, 1862.

(*See General Remarks and Reports on Special Crops on page* 264.)

NOTE TO REPORTERS.—It is very important that a large number of the reports be mailed earlier than heretofore. It is useless to put two rows of figures, *for we are* obliged to average them after each month. It is also perplexing to have the words *fair, good, pretty good, poor*, etc., used instead of figures. After a crop is harvested, please estimate it, and mark figures as usual.

EXPLANATIONS TO THE READER. (Full details are given on the Blank Forms furnished to Reporters.)

The First Column gives the Counties from which the reports come. In many cases the territory reported upon extends over adjacent counties, and the figures apply to a larger territory than the county name indicates. It is not sometimes to single townships only.

The Second Column gives the number of persons in each county or locality, the average of whose opinions are embraced in the single rows of figures, standing opposite in the same line. In several cases a whole County is represented by an officer of the Agricultural Society, who gives the summary of reports from assistants in each of the towns. An indication that a large but indefinite number of persons joined in making the report.

The Third Column gives the names of the persons who received and distributed blanks, and collected and forwarded returns.

☞ *In all the reports the numeral* **10** *is taken as the standard for comparison*, thus :

Column A—10 means that the weather for a month previous to the date of the report was about as good as the average for other years, that is for growing crops and for general farm operations. Figures above or below **10** indicate the comparative propitiousness or unfavorableness of the weather.

Columns—B—E—H—In these **10** indicates that the amount of surface growing is about the same as *last year*. Each figure (or unit) above **10** means a tenth more of surface, and each unit below **10**, means one-tenth less. Thus, **5** means one-half of average surface—**15** means one and a half—**20** means double, and so on.

Columns C—F—I—L—N—P—S—In these columns **10** means that the average surface sown or planted or growing is about the same as the average for five years past. Each unit above or below **10** stands for an increase or decrease of one-tenth in the surface.

Columns D—G—K—M—O—R—T—U—V—In these columns **10** means that the *condition* and *prospect* at the date of Report, indicated an *average yield per acre*. Here also each unit above or below ten indicates the prospect of a yield a tenth above or below the average ; thus, a half crop is indicated by **5**—a double crop by **20.** Some report fruit prospects at **100** to **150**, meaning that the promise is for ten to fifteen times the average.

Blanks left in a column indicate that little or none of the crop is grown, or that it is too early to report upon it, or that the reporter could not estimate satisfactorily to himself. No reports have been received from some whose names are in the list, and who furnished reports last month.—For commeuts and reports on other crops see page 264.

Registered No.	County and number of persons reporting from each.	Persons gathering and sending the reports.	Weather.	Winter Wheat.	Spring Wheat.	Corn.	Rye.	Oats.	Hay.	Potatoes.	Fruit.
			Surface in rel. to ave. yrs.	Prospects at date.	Surface in rel. to ave. yrs.	Prospects at date.	Surface in rel. to ave. yrs.	Prospects at date.	Surface in rel. to ave. yrs.	Prospects at date.	Surface in rel. to ave. yrs.	Prospects at date.	Surface in rel. to ave. yrs.	Prospects at date.	Apples.	Peaches.
	OHIO.		A	B	C	D	E	G	H	K	L	M	N	O	P	S	T	U	V
1	Washington..	2 A. J. Hart.	15	12	10	25			10	12	12	12	15	10	8	10	15	10	15
2	Angelize	1 Samuel Craig	11	10	10	15			8	9	9	10	10	11	9	10	11	10	10
3	Miami	1 J. Mendenhall	11	11	12	12			10	11	9	10	10	9	6	10	10	10	25
4	Trumbull	1 L. P. Andrews	13	10	10	25			8	12	9	10	10	9	7	10	12	10	8
5	Huron	1 Dr. Robertson, Jr.	10	10	10	15	11	9	9	10	9	10	10	10	9	10	12	10	9
6	Crawford	1 Dr. Robertson, Jr.	10	15	10	15			10	15	10	15	10	15	10	15	10	15	5
7	Ashtabula	1 J. W. Kenyon	10	10	10	20	10	10	10	10	10	10	10	10	10	10	10	10	10
8	Licking	20 G. W. Penny	10	12	12	20			12	12	12				10	14	12	14	20
9	Portage	1 H. G. Spooner	10	10	10	30	10	20	10	10	10	10	10	10	10	10	10	10	10
10	Stark	13 Jacob Holl	10	12	10	13	10	30	8	10	10	8			10	10	10	10	15
11	Pushing	1 J. Pushing	10	10	10	10			8	8	8	10	10	10	10	10	10	10	20
12	Jackson	1 D. Mackley	20	12	15	20			10	15	10	12	7	8	10	15	12	20	30
13	Richland	1 Joel Myers	10	10	10	15	10	30	10	10	10	10	10	10	10	10	10	7	50
14	Fairfield	1 Thomas Cole	10	12	12	20			10	11	12	10	10	10	5	11	12	12	20
15	Wyandot	11 J. Fraizer	10	11	10	15	10	50	7	10	12	13	8	10	10	10	15	12	30
16	Portage	1 Homer Mills	10	12	10	20			10	10	10	10	15	10	10	10	10	12	12
17	Ashland	10 R. M. Clegg	10	12	10	15	10	15	10	10	10	12	10	10	10	10	10	12	30
18	Wayne	1 G. Kennedy	12	11	10	13	10	13	15	10	10	10	9	9	8	10	10	10	10
19	Coshocton	1 J. B. Burt	10	10	10	20			10	10	10	10	10	10	10	5	10	10	15
20	Muscatawas	1 L. G. Mikesh	5	8	13	12			12	13	10				10	10	5	15	20	12	15
21	Erie	3 D. C. Hanson	8	13	10	10	15	50	8	9	10	10	9	10	10	10	10	10	10	13	100
22	Washington	1 J. Washington	10	10	10	20			8	10	10	10			9	9	10	10	10	15	50
23	Morgan	1 Wm. Milhons	8	12	12	25	7	8	8	10	10	10			10	10	8	10	8	10	15
24	Licking	1 John Edwards																			
25	Portage	4 A. S. Plummer	17	11	10	16	10	09	5	10	12	16	10	10	11	9	13	13	8	9	50
26	Morrow	1 S. Haskins																			
27	Ashtabula	1 C. G. Calkins	15	10	10	12	15	8	8	10	10	8	8	10	9	8	8	10	10	15	
28	Trumbull	1 Thos. McCue	10	10	10	15			8	9	9	10	10	11	9	10	11	10	10	10	
29	Belmont	23 Slater Brown	10	10	10	15	10	8	8	10	10	10	10	12	8	12	15	10	10	20	
30	Butler	3 Isaac Youmans	10	12	12	15	10	10	10	10	10	10	10	10	7	10	10	6	10	8	
31	Greene	1 Chay Cox.																			
32	Licking & Fch	1 Isaac Strang	10	12	15										10	15	10	15	10	10	
33	Richland	1 R. S. McFarland.	10	12	15				10	12	15	10	15	10	10	15	10	15	10	10	
34	Fayette	1 D. M. Jones	10	10	12	25			13	15	14	12	10	15	4	10	12	10	12	30	30
35	Butler	1 John M. Millikin																			
36	Miami	1 J. K. Fretz	12	11	12	15			10	10	11				9	8	12	12	10	10	100
37	Union	1 Dr. R. P. Mumma																			
38	Wood	1 M. H. Pennell																			
39	Pickaway	6 John Courtright	10	12	13	15			10	10	13				10	5	10	12	10	12	50
40	Columbiana	1 D. W. C. Longshore	11	10	9	10	15	8	10	10	10	10	10	10	10	10	10	10	10	10	50
41	Lorain	1 J. B. Lang		15	12				10	10	12				12	8	10	10	15	10	12

Dist	County.	No.	Chief Reporters.	Winter Wheat	Spring Wheat	Corn.	Rye.	Oats.	Hay	Potatoes	Fruit. Apples
				A	B C D E	F G H I K L	M	N	O P R S	T	U V
	INDIANA.										
51	Benton		D. Campbell								
52	Jay		Peter Walter								
53	Hendricks		A. Whitesell								
54	Knox		Joel Wampler								
55	Randolph		C. G. Puckett								
56	Jefferson		T. B. Redding								
57	Henry		John Allen	15	11 14 13	13 15 12		9 2	10 15	10 10	10 20
58	Sullivan		Murray Briggs	8	11 13	10 12 12 11		8 2	10 18	12 15	12 25
59	Hendricks		Jacob Dale	10	13 14 13	12 15 12		8 2	10 18	12 15	12 25
60	Marshall		Fred. Hoover	10	13 15 10	12 15 10		10 15	10 10	10 12	13 100
61	Starke		L. Salthasrsh	10	10 13 12	10 10 9	10 10	8 4	10 10	10 10	8 12
62	Henry		P. P. Hiner	10	11 13 10	10 11 12		8 3	10 10	10 10	13 12
63	Vermillion		S. Gronigke	10	12 13 15	10 12 12		8 3	10 10	10 10	13 12
64	Hendricks		A. Farnas	9	10 11 15	10 10 9	10 10	10 13	8 11	13	6
65	Clay		John Bennett								
66	Newton		Elem G. Smith	7	15 10 15	10 10	5	13 12	10 7	10	6
67	Grant		Thomas Jr.	10	13 14 13	12 15 12		8 3	10 10	10 10	13 40
68	Switzerland		W. H. Stow	10	12 14 13	8 8	10 11	12 5	10 12	7	20 7
69	Green		Wm. Hovis	10	11	9 12 12	10	12 5	10 12	10	10 10
70	Adams		P. N. Collins	8	10 13	8 8		8 2	10	10	15 40
71	Adams		Solomon McConnel	10	15 13	10 12 12		8 3	10 10	10 10	13 40
72	Ripley		John Bennett	10	12 13	9 10 12	10	8 3	10 12	10 12	14 14
73	Eldhart		D. S. Kerrington	12	12 13	9 11 11	10	9 4	10 12	10 12	14 14
74	Warwick		John T. Fleming	15	15 14 12	10 15 12		10 5	10 10	10 10	5 5
75	Johnson		Hurricane P's As	8	12 9 12	9 10 8	10	10 7	10 15	10 12	15 15
76	Jay		Joseph Hall								
77	Decatur		John W. Smith	10		10 11 12		10 11	10	10	10
78	Vermillion		John Davis	9	10 10 12	8 10 11	10	13 12	8 5	10 12	10 10
81	Morgan		C. S. Hilbourn								
82	Vigos		James M. Lyons	10	13 15	15		10 12	15 10	10 12	5 15 15 15
83	Randolph		L. M. Reeves								
84	Hamilton	99	Andrew F. Evans	10		10					
85	Marion		L. W. Ritter	10	13 10 12		10	13 9		10 15	11 10 8 11
86	Howard		Wm. S. Woolon								
87	Dubois		B. R. Kemp	10	12 15	10		10 12	15 10	10 10	10 10
88	Vermillion		James M. Lyons	10	10 10	10		10 12	15 10	10 10	10 10 12 15 15
	ILLINOIS.										
101	McDonough		Nelson Abbott								
102	Coles		C. Boles								
103	Saline		James M. Eaton	10		10		11 13 11	10	5	10 12 10 20
104	Logan		J. M. Reed	12	10 10	10		10 12 11	10	10	10 12 10 20
105	Jasper		Henry Grilling	6	15 15	9	10 13	8 12 10	8 5	10 10	8 10 6
106	Pike		Thos. Dudgeon	12	12 10	7 8 5	8	8 10		10	10 10
107	Vermilion		H. C. Smith								
108	Vermilion		W. S. Hunt								
109	Sa Clair		Edw. Flanagan	10	12 15			8 6 10			8 15 10 8
110	Marion		E. L. Merritt								
111	Pekatt		Wm. Brandt								
112	Macoupin		Harry Grundy	9	13 12 20	5	5	9 12		8	10 11
113	Cumberland		J. E. Mumford								
114	Putn'me Mor'h		C. C. Hoagland	8	8 8 8	8 10 0	6	12 10 12	5 10	12 15	15 15 10 12
115	Woodford		Jesse Freeman	10	10 8	9	9	9 12	10	10	10 10
116	Ogle		John Sharp								
117	Vermillion	6	William Bowman	10	12 13 10		9	10 11	13 15	8	10 12 10 20 50
118	Sankakee		Democrat Office								
119	Kendall		E. S. Hills								
120	Crawford		Erastus Logan								
121	Douglass		Caleb Bates								
122	Mason		J. B. Wright								
123	Douglass		C. J. Hasbrouck								
124	Warren		A. H. Trecy								
125	Mason		L. Arburger	15	10	7 4	7	6 13	10	9 15	7 4 15 15
126	Marshall		W. H. Webbers								
127	Washington	1	A. A. Bent	10	12 13	10		12 13	15 12	10	15 12 10 15 10
128	DeKalb		N. P. Graves								
	WIS.										
131	Sauk	13	Abijah Sweet	10	10 20	20	20	20	10	30	30	20	30 30 10 10
132	Dodge		D. L. Bancroft								
133	Food'n Lac		Geo. Gross			11	14	12	10	10	9	11
134	Walworth	1	Geo. Cross	12		16	11	9	9		10 12	16	15 10 10
135	Green Lake		C. S. Whittier								
136	Jackson		V. F. Gansil	9	6	10	13	10	10	9	11	15	10 10 9 11
137	Dane		A. A. Kiersted			5	8	5	11	7	10	10	5 10
138	Trempleau	1	F. S. Newland	10	20	15	15	15	15	10	10	12	15 15 12
139	Grant	1	A. J. Curtis	10	10	5	15	10	8	12	10	10	10 10 5
140	Adams		W. Pierce								
141	Badax		J. A. Socurity								
142	Food'n Lac	1	A. A. Horton	11		10	10	8	8	10	9	14	12 11 10 9
143	Monroe	11	G. M. Robinson	10	11 15	8	11	9	8	5	10	10	10 5 12 9 15 5 20
144	Green		O. D. Hawkins								
145	Brown	15				15	9	0	5	10	10	10	10 20 10 15 10 5
146	La Fayette		J. C. March								
147	Grant		Thos. Pendleton								
148	Grant		S. D. Watkins								
149	Grant		D. B. Newton	10	8 12	9	12	15	10	11	10	15	10 10 11 10 10 13
171	Iocle	1	H. D. Root	10	50	8	8	11	12	7	10	10	10 10 10 5
	NEBRASKA.										
201	Jackson		H. Stephens								
202	Clinton		C. W. Hatch								
203	Cedar		A. A. Macy								
204	Scotte		H. C. Wood								
205	Linggold		I. S. Beall								
206	Delaware	99	A. McCreery	13	15 16 16	16	7	6	14	11	11	12	8 13 10 10 13 8
207	Dowshire	1	Erastus Snow	8	11			8	18		9		8 15 15 10 15
208	Marion		A. C. Bellamy								
209	Cedar	1	M. C. Alexander								
210	Madison		J. Carman								
211	Scott		F. F. C. Schmidt								
212	Buchanan		H. C. Heinaway								
213	Cedar		A. Hartman								
214	Lucas	1	M. Moorhead	11		9	13	8	8	14	11	14	10
215	Jackson		H. Kendenlaugh	9	11 10	11	12	9	10	10	10	10	10
216	Linn	1	F. H. Williams	15		10		10	11	12	10		10 8 15 15 15 10
217	Linn	1	W. A. Pendleton	10		10		9	10	12	10		10 8 15 15 15 10
218	Madison	15	Josiah Canucan	10	8 10 12	8	10	8	8	12	12	12	5 12 9 10 20 5 10 10
219	Scott	1	J. F. C. Schmidt	8	9	9	10	8	8	12	12	12	5 12 9 10 20 5 10 10
220	Wayne	1	J. S. Whitaker	11	11 12	9	11	8	8	12	12	12	5 12 9 10 20 5 10 10
221	Delaware		C. Jones								
222	Jones		Isaac Willard								
223	Linn	1	H. C. Raymond								
224	Benton	1	H. E. Belden								
225	Howard	1	A. H. W. Partch								
	MINN.										
251	Hennepin	1	Jonas H. Howe	12	11 10	15	11	13	12	15	10	15	10 8 7 10 12
252	Fillmore	1	A. Gould	15	15 15	15	15	15	15	15	15	15	15 15 15 15 15 15
253	Fillmore	1	H. H. Patch	10	15	15	12	15	10	12	10	9	15 9
254	Olmsted	1	H. H. Talbot										
255	Winona	21	S. S. Condon	14	13 20	10	11	15	14	13	12	11	10 15 15 20 12 10 12 14 10
256	Sibley		J. D. Green										
257	Scott	1	Wm. H. Sigler										
258	Fillmore	1	A. A. Hitchcock	12		13	20	12	13	20	13		12 10
259	Goodhue	1	Wm. Smith	15		15	15	10	12	14	15	10	15 12 12 10
260	Wabasha		Wm. McLeond	14									
261	Blue Earth	1	James Miller	14		15	10	8	9	5	15	20	14 30 15 10 11 10 14 15 6
	MO.										
300	Maries	9	W. J. Meeder	15	9	10	10	11	15	5	10	12	10 10 9 8 10 8 10 10 10 8
301	Mississippi	1	Geo. Whitesmith	15	7	13	15		5	7	15		5 5 5 15 5 15 15 15
302	Franklin	1	Charles E. Ross	9									15 15
	ICY.										
329	Spencer		Milton McGrew										
	MICH.										
333	St. Joseph	3	O. W. Beall	10	10 10	7		10	10	10		10	10 10 11 10 11 10 10 20
334	Berrien	1	A. Bennett	10	10 12	9		10	12	14		8	10 10 9 10 9 12 4 5
335	Clinton	1	H. C. Hodge	12	5			12	15	15		15	12 13 15 12
336	Sanilac	23	C. Waterbury	10	20 20	11	8	8	7	10	12	10	10 15 15 8 15 5 10 10 10
337	Calhoun	1	C. M. Kerr	10	10 12	8		8	15	12	15	12	8 15 10 12 10 10 10 10 15
338	Clinton	1	John Walling	8	20	20		15	40	5	10	10	5 12 5 10 20 5 20 5
339	Lenawee	1	Philo Baker	10	11 14	10	5		10	10	10		10 11 10 13 10 10 10 80
340	Ionia	1	D. T. Lawrence										
341	Ionia	1	Charles Goodrich	15		15		10	12	9	11		12 10 10 10 15 10

Dist	County.	No.	Chief Reporters.	Winter Wheat	Spring Wheat	Corn.	Rye.	Oats.	Hay	Potatoes	Fruit. Apples
				A	B C D E	F G H I K L	M	N	O P R S	T	U V
	N. Y.										
401	Chautauqua	1	John J. Phelps	10	10 12 12	10 10 11	12	13 12		10	10 20
402	Orleans	3	Peter Ferris	10	12 13	9 10 7	4	8 8	8	10	10 7 10 30
403	Lewis		John F. Bates	10		9 10 10		10 10	10	7 10	10 10
404	Wyoming	1	Lima De Wolfe	10	15	8 15 11 10 12	10	10 5		10 13	10 10 30
405	St. Lawrence	14	J. S. Wallace	11		10 13 13	12	11 9	7	10	7 10 7
406	Delaware		Levi Mires	10	14	8 10 8	12	11 9	7	9	8 13 10 4	9	5
407	Niagara		J. Q. Adams								
408	Suffolk		G. D. Woodruff	10	12 15	5	8	6	10	12	11 15 15 15	12	15
409	Fulton		Geo. W. Benton								
410	Niagara		A. E. Raymond								
411	Oswego		D. Fariley			7 15	12	10	10		10 15	15	8 50
412	Oswego		T. Richmond	10	12 20	8	5	4	8	10	10	10	10 10
413	Oswego		T. Richmond	10	12 20	8	5	4	8	10	10	10	10 10
414	Wayne		A. M. Richardson	10	13 12 15	10	8	10	10	6	15	10	8 10 8 10 20
415	Cayuga		W. W. Thompson								
416	Chautauqua		R. A. Whittemore	10	10 15	10	15	10	15		10 12	10	10 10 10 10
417	Clinton		R. A. McKay	10	13 15	10	12	10	12	10	10 12	10	10 10 10 10
418	Saratoga		J. C. Rouse	11	13 14	12	12	12	12	15	10 12	12	10 10 12 10
419	Cayuga		G. S. Sewell	10	12 14	8	7	9	9	11	8 11	8	10 10 10 10
420	Queens		Farmer's Club	10	10 11		10	10	10	10	10	10	10 10 10 10
421	Essex		Jos. E. Smith								
422	Suffolk		Watson Wilson	15	15 20	12	10	15	12	20	20	15	15 15 12 15
423	Westchester		T. Griffin	10	7	8	12	10	8		6		10 10 11 8 9
424	Westchester		James Wood								
425	Orange		J. H. Weaver	10			8	8	12	7	8	12	10 10
426	Broome		Cephas Benedict								
427	Broome		John Henderson								
428	Allegany		Daniel H. Cobb								
429	Broome		L. H. Treadwell	10	10	7	11	12	8	15	12	9	10 8 10 11 11 10 10 10 80
430	Broome		E. Rogers Jr.	10	10	7	11	12	8	15	12	9	10 8 10 11 11 10 10 10 60
431	Niagara		E. S. Holmes	13	13 20	12	20	8	6	6	8	10	8 10 10 9 5 10 12
432	Broome		Rice Beck								
433	Suffolk		Albert A. Mott	8	10 10 12	10	10	9	8	8	11	10	6 10 11 10 7 10 12 15 18
	PA.										
451	Franklin		John F. Clayton								
452	Franklin		J. Jas. H. Clayton	10	12 11 11			11	10	11	6 11	5 11	10 10 10 12 16 11
453	Franklin		A. B. Sarns	10	12 13	9	8	9	10	10	8 10	10	10 10 10 10 12 8
454	Sayder		C. Weirick						10	10	8 10	10	10 10 10 12 8
455	Franklin		S. Brown	10	12 10 11			10	10	11	6 11	5 11	10 10 10 12 16 11
456	Fayette		F. Orgievee	10	10 10 10	5	15	5	10	10	15	8	9 5 5 10 15 15 16 16 10 20
457	Donegal		D. Pitchbill								
458	Franklin		J. Sharpe Nixon	8				9	10	8			10 10 10 15 15 15
459	Perry		Jos. Kaufman	10	13 15	5	10	12	10	10	10	10	10 10 10 10 15 15 15
460	Montgomery		J. C. Boorse	10	10 12	15		10	12	9	14	15	8 9 10 10 14 9 15 15
461	Lancaster		Cyrus Britton	10	12 13	8		10	12	9	14	15	8 9 10 10 14 9 15 15
462	Lancaster		Jacob M. Seitz	10		8	10	8	10	8	8	12	10 10 9 5 10 12 15
463	Franklin		John Lloyd								
464	Franklin		John Hoke	10	12 15	18		10	10	5	10	5	10 10 15 10 10 30 30
465	Franklin		Chas. G. Gorden	10	12 15	18		10	10	5	10	5	10 10 15 10 10 30 30
466	Franklin		O. H. Anderson	10	12 10 11			10	10	10	10	10	10 10 10 10 10 60 20
467	Blair		S. H. Replogle	10	12 10 11			10	10	10	10	10	10 10 10 10 10 60 20
468	Centre		D. G. Rich	10	10 10 12			8	10	12	10	8	10 10 10 10 16 30 60
469	Butler		Finley Dalph								
470	Montgomery		J. Bolton	12	10 10 11						
471	Susquehanna		G. B. Slack	12	10 20 10			10	12	15	10	8	8 12 15 10 10 8 15
472	Fayette		Jos. Robinson	10	10 10 10			10	10	10	10	10	10 10 10 10 10 10 10
473	Washington		John Post	10	10 10			10	10	10	10	10	10 10 10 10 10 10 10
474	Lancaster		H. Musselman								
475	Columbia		A. P. Young	11	13 11			9	10	10	8	11	10 10 10 11 11 12 30
476	York		J. Barnitz								
477	Washington		Jos. M. Cleary								
478	Centre		A. Y. Tinsley	10		10	10	10	8	10	8	7	5 10 10 10 10 10
479	Bedford		D. M. Sare	10	10 12	15		10	15	14	8	10	10 12 10 10 14 10 12
480	Somerset		A. J. McElvain	10	10 12	15		10	15	14	8	10	10 12 10 10 14 10 12
481	Indiana		J. M. McGaughey	14	10 11	20	11	12	14	14	10	10	11 9 10 10 12 10 20
482	Luzerne		Santoro	14	10 11	20	11	12	14	14	10	10	11 9 10 10 12 10 20
483	Cumberland		John B. Hoover	9	10 10	12	10	10	10	9	10	11	10 8 10 9 11 12 12 10
484	Armstrong		J. McClymond								
485	Venango		C. Ballet	10	10 11	12	15	10	10	15	10	10	10 10 10 10 10 60 10
486	Susquehanna		J. M. Richard	15	10	8	10	10	8	11	10	12	10 10 15 10
487	Huntingdon		B. Brumbaugh	8	12	8	12	8	8	12	10	12	8 8 12 10 10 10 10
488	Allegheny		I. L. Walker								
	N. J.										
501	Cape May		J. G. Leach								
502	Mercer		S. N. Nicholson	10	10 15	15		15	18	8	8	9	8 9 10 10 10 12 15 30
503	Somerset		P. D. Vroom	10	10 10	20		10	10	9	10	10	10 10 10 10 10 12 30 60
504	Hunterdon		D. J. Hinkelwell	10	10 10	20		10	10	9	10	15	10 8 10 12 60
505	Warren		Jas. I. Blackwell	10	10 10	20		10	10	9	10	15	10 8 10 12 60
506	Middlesex		J. G. Shultz	12	13 15	15		15	18	8	8	10	8 10 10 10 15 15 50
507	Monmouth		J. C. Morton	12	13 15	15		15	18	8	8	10	8 10 10 10 15 15 50
508	Warren		C. O. Harris					10	12	8		10	7 12 15 15 10 16 35 30
509	Hunterdon		A. L. Melick					10	10	10		10	10 10 10 10 10 10 10
510	Camden		J. S. Coles					10	12	10		10	11 13 11 10 9 10 11 10 10
	DEL.										
551	Kent		T. B. Conrsey	13	10	8		10	12	10		8	4 20 12 10 12 20 20
552	Kent		M. Hayes	7	10 12	10		10	13	8	10	10	8 8 10 10 10 14 5
553	New Castle		C. Charchman, jr	10	12 13	10		10	12	10	10	10	10 10 10 10 10 12 30
554	New Castle		D. B. Higgins	10	13 15	8		10	10	9		7	6 10 11 10 12 23 8
	VA.										
571	Loudon		F. E. Meldahl	10	12 12	10		10	8	10		13	8 10 13 10 13 8 10
572	Wood		J. E. Wharton					11	14	14		12	8 20 10
	MARYLAND.										
601	Wadd		Geo. F. Brackett	10		9	8	10	10	13	10	12	10 12 10 15 15 20
602	Rembebee		B. M. Manson								
603	Sunderland		W. W. Johnson			8	10	10	8	8	10	12	10 10 12 6 11 10 15
604	Somerset		R. A. Davis	8	10 15	5	20	25	15	10	20	10	5 8 10 10 6 20 15 30
	N. H.										
626	Cheshire	9	Geo. H. Gilbert	8	10 10	10	10	13	9	10	11	10	10 10 10 10 10 12 10 12
627	Merrimack	13	J. W. Simonds	10	12 13	10	10	10	10	10	10	10	10 10 10 10 10 10 10 10
628	Coos		Joseph Spinney	10		10	12	10	10	10	11	10	11 12 10 12 12 10
	VT.										
629	Bennington	5	Allen Benson	13		9	9	11	12	13	10	10	11 12 9 13 10 11 12 15
630	Orange		J. H. Cleaveland								
631	Caledonia		Darius Bevo	10		11	10	9	10	11	10	10	10 11 11 10 11 10 95
632	Caledonia		J. Lawrence	10		13	15	10	9	8	12	10	12 12 10 7 14 11 50
633	Chittenden		W. H. Kingsbury	12		15	15	10	10	8	12	10	12 12 10 7 14 11 50
634	Franklin		F. H. Towle	10		10	10	10	9	9	12	12	10 6 10 12 10 12 30
635	Windham		A. Petree	10		10	10	10	10	10	10	10	10 10 10 10 10 10 30
636			S. Howard, jr										
	MASS.										
637	Berkshire		S. S. Jeune	10			12	12	5	10	15	15	10 15 10 10 12 13 12
638	Plymouth		Charles A. Wood										
	CONN.										
700	New London		W. H. Starr										
701	New Haven		S. C. Phelps						7	10	10	10	7 10 10 10 7 10 10
702	Litchfield		G. R. Reynolds	8					10	10	10	10	10 10 10 10 10 7 12 8
703	Litchfield		G. R. Reynolds	8					10	10	11	10	11 11 11 11 11 6 15 8
704	Litchfield		Wm. Gilbert										
705	Litchfield		J. P. Barstow						10	10	10	10	10 10 10 10 10 10 10
706	New London		A. Chapman										
707	New London		F. S. Luther	10		10	11	11	8	10	10	12	10 11 8 9 13
	R. I.										
736	Newport		S. F. Macomber	15				12	13	13	10	10	12 13 10 12 12 13 12
	KANSAS.										
751	Brown		David Peebics	13	12 50	12	10	20	10	8	30	15	30 15 50 6 30 15
	TEXAS.										
802	Pettie										
803	Tehama		Thos. H. Fisher	10		12	12	12	10	10	20		10 7 10
	COLORADO.										
804				10	20	15	50	13	20	18		20	20 25 15 10
	CALIF'A.										
855	St. Barbara										
				A	B C D E	F G H I K L	M	N	O P R S	T	U V
	Number of Persons		968	9	6 8 8	9 9 9 9 9 9	9	9	9 9 9 9	9	9 9
	Average for the whole Country			10	11 12 11	10 11 10 10 10 10	9	9	9 9 9 9	9	9 9

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J. R. HOFFER, Mount Joy, Pa.

Market Review, Prices, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Tuesday Morning, August 19, 1862.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
26 days *this* m'th	481,000	3,270,000	2,510,000	132,000	53,000	437,000
23 days *last* m'th	654,000	3,239,000	2,355,000	73,000	43,000	447,000

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley*
26 days *this* month	576,000	5,430,000	2,980,000	118,000	——
23 days *last* month,	642,000	4,726,000	3,052,000	132,000	6,000

2. *Comparison with same time last year.*

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
26 days 1862......	481,000	3,270,000	2,510,000	132,000	53,000	437,000
26 days 1861......	325,000	1,784,000	2,434,000	136,247	114,700	449,000

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
20 days 1862......	576,000	5,430,000	2,980,000	118,000	——
20 days 1861......	460,000	3,523,000	3,561,000	165,500	——

3. *Exports from New-York, from Jan.* 1 *to August* 13.

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862....	1,944,963	11,853,216	7,833,124	956,804	22,128	24,332
1861....	1,605,180	12,910,423	5,713,977	315,452	1,000	143,164
1860....	784,286	3,147,279	1,680,631	6,000	8,280	99,900

The business in Breadstuffs, during the past month, has been vigorous on the whole, and quite encouraging. The fluctuations in the value of gold, and of Sterling Exchange Bills, have been generally unfavorable to the export trade ; yet extensive foreign orders have been received and executed, giving a very satisfactory exhibit in the Custom House returns, of the month's shipments of Flour and Grain to Europe, especially to Great Britain. Private letters from the Old World are explicit in their representations of the deficiency of the crops, and the probable wants of Western Europe, making it reasonably certain that our own country will be called upon to furnish liberal supplies, and that, too, at prices, which (thanks to a benign Providence and the unusual fullness of our harvests) will enable us to defy all competition. The rate of exchange is still decidedly in our favor ; while it is as decidedly against Russia, our only serious rival in the production of food, for export ; and this circumstance gives us an important advantage. Our receipts from the interior continue on a large scale ; but much of the grain coming forward is damp, dirty, and unfit to ship, and on this account, the principal foreign buyers are somewhat embarrassed in the execution of orders for desirable lots of Wheat and Corn, particularly the former. There is very little other than mixed Corn arriving—yellow and white being quite scarce. The condition of the Rye now coming to market, especially from the North-west, is very poor indeed, and shippers are reluctant to make free purchases. Barley is quite nominal in value, as there is no demand for it. The market generally, in fact, closes stiffly at the improved prices quoted in our accompanying tables, the tendency being towards a higher range. The last steamer brought somewhat more favorable *weather* reports from England and France ; but the letters received in the same mail, can not be said to present any more encouragement in regard to the probable yield of the harvests in those countries....Cotton has been less active, and has been depressed, the market closing heavily. The receipts have been comparatively liberal, and buyers have been less eager to purchase in advance of their actual wants....There has been rather more activity in Provisions at slightly improved prices for the principal articles....Rice has been in moderate supply and demand ; the bulk of the sales being composed of East India, in the absence of Carolina, which has been out of market for some weeks....The inquiry for Hay and Hops has been good, for the season, and prices of the former have advanced....Tobacco has been in fair request at firmer rates....Wool has been freely purchased, chiefly by manufacturers, at higher quotations, the market closing quite buoyantly, particularly for domestic, the receipts of which have been very moderate, not only here, but at all the sea-board markets....The transactions in other agricultural products have been on a moderate scale. The table of prices show the changes and present rates.

CURRENT WHOLESALE PRICES.

	July 18.	Aug. 19.
FLOUR—Super to Extra State	$4 60 @ 5 25	$4 95 @ 5 40
Superfine Western..........	4 55 @ 4 85	4 95 @ 5 10
Extra Western..........	5 25 @ 7 00	5 25 @ 7 00
Fancy to Extra Genesee......	5 25 @ 7 00	5 45 @ 7 00
Super. to Extra Southern....	5 20 @ 7 00	5 30 @ 7 25
RYE FLOUR—Fine and Super.	2 75 @ 4 10	3 00 @ 4 30
CORN MEAL..........	2 85 @ 3 25	3 45 @ 3 75
WHEAT—Canada White......	1 30 @ 1 40	1 37 @ 1 50
Western White..........	1 30 @ 1 45	1 37 @ 1 55
All kinds of Red..........	1 02 @ 1 28	1 11 @ 1 40
CORN—Yellow..........	55 @ 58	64 @ 66
White..........	60 @ 70	70 @ 75
Mixed..........	48 @ 54	54 @ 62
OATS—Western..........	45½@ 47	48 @ 51
State..........	47 @ 48	51 @ 52
RYE..........	74 @ 78	76 @ 83
BARLEY..........	None selling.	None selling.
HAY, in bales, per 100 lbs....	59 @ 65	65 @ 75
COTTON—Middlings, per lb....	46 @ 47	46 @ 47
RICE, per 100 lbs..........	7 25 @ 7 50	6 50 @ 8 50
HOPS, crop of 1861, per lb.....	14 @ 20	15 @ 21
FEATHERS, Live Geese, p. lb..	41 @ 43	40 @ 42
SEED—Clover, per lb..........	7½@	8 @ 8½
Timothy, per bushel..........	None selling.	1 87 @ 2 00
SUGAR—Brown, per lb........	7½@ 10½	7½@ 10¼
MOLASSES, New-Orleans, p.gl..	45 @ 50	33 @ 42
COFFEE, Rio, per lb..........	20 @ 22½	21¼@ 23
TOBACCO—Kentucky,&c,p.lb..	8 @ 19	9 @ 20
Seed Leaf, per lb..........	7½@ 25	9 @ 30
WOOL—Domestic fleece, p. lb..	47 @ 56	45 @ 60
Domestic, pulled, per lb......	36 @ 50	35 @ 53
TALLOW, per lb..........	10 @ 10¼	10½@ 10¾
OIL CAKE, per tun..........	33 00 @38 00	33 50 @41 00
PORK—Mess, per bbl..........	11 00 @11 25	11 37½@11 50
Prime, per bbl..........	8 75 @ 9 00	10 00 @
BEEF—Plain mess..........	11 25 @13 00	13 75 @14 00
LARD, in bbls., per lb........	8 @ 9¼	8¾@ 9¾
BUTTER—Western, per lb.....	9 @ 14	9 @ 15
State, per lb..........	10 @ 17	10 @ 18
CHEESE..........	5 @ 8	5½@ 8½
Broom Corn—per lb..........	5 @ 7	5 @ 7
EGGS—Fresh, per dozen......	12 @ 12½	10 @ 11
Western, per doz..........	10 @ 11	9 @ 10
POULTRY—Fowls, per lb......	10 @ 11	10 @
Ducks, per pair..........	38 @ 50	38 @ 50
Geese, per pair..........	1 00 @ 1 25	1 00 @ 1 25
Turkeys, per lb..........	11 @ 12	11 @ 12
POTATOES—Junes,p. bbl......	2 00 @	1 13 @ 1 25
Dykemans, per bbl..........	2 25 @ 2 50	1 13 @ 1 25
Buckeyes, per bbl..........	5 25 @	1 25 @ 1 50
Mercers, per bbl..........		1 50 @ 2 00
Sweet Delawares, per bbl....		6 50 @
ONIONS—Red Bermud, p.bbl.		1 75 @ 2 00
TURNIPS—White, p. bbl......	1 00 @ 1 25	50 @ 75
Rutabagas, per bbl..........	1 00 @	50 @ 75
SUMMER SQUASHES, per bbl..	1 75 @	1 00 @ 1 25
Marrow Squashes, per bbl...		87 @ 1 25
TOMATOES, per bush..........		20 @ 25
GREEN CORN, per 100..........		37 @ 50
CUCUMBERS, per 100..........		25 @ 37
HUCKLEBERRIES, per bushel..	2 50 @ 2 75	2 00 @ 2 25
BLACKBERRIES, per bushel...	2 00 @	2 00 @ 2 25
do. per qt. box...	10 @ 12	8 @ 9
APPLES, good, p.bbl..........	3 00 @	1 25 @ 1 75
Apples, common, per bbl....		75 @ 1 00
PEACHES, Delaware,p. basket		87 @ 1 25
Peaches, N. J., per basket....		50 @ 87
PLUMS, per bushel..........		1 00 @ 1 50
PEARS, cooking, per bbl.....		1 25 @ 1 50
Pears eating, per bbl........		1 75 @ 2 50
WATERMELONS, Del., per 100		25 00 @30 00

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been abundantly supplied during the past five weeks, the average being 4,535 per week. July 22, the large number of 5,582 were offered. Prices declined ¼c., and 250 were left unsold.—July 29, there were 3,887 head, with no change in prices. August 5, receipts 4,629 head, and ½c. decline. August 12, 4,448 head, and a further decline of ¼c. To-day, (August 19.) with 4,130 bullocks on sale, trade has been very lively, and all the cattle were sold at an early hour at ½c. advance. or 8¼c. @8½c. ℔ lb., estimated dressed weight, for prime beeves ; 7¾c.@8c. for good ; 6½c.@7c. for poor ; average 7½c.

Veal Calves.—Receipts are light, (530 per week,) but sufficient for the demand of hot Summer weather, though they are ½c. higher than they were 5 weeks ago. The best calves sell at 5½c. ℔ lb live weight, and ordinary veals 4c.@4½c.

Sheep and Lambs.—Receeipts are on the increase, but do not keep pace with the demand, and prices have gradually advanced during the past few weeks. Good sheep now sell at prices equivalent to 4½c. ℔ lb., live weight, and fat lambs at 5c.@5½c. The weekly average has been 11,176 since last reported.

Live Hogs have been coming forward very freely, the average for the past 5 weeks amounting to 12,040 ℔ week. Prices have been pretty good, except for week ending August 12th, when near 15,000 hogs produced a glut, and carried prices to 3¾c.@3½c- for fat corn-fed hogs. They are now worth 3½c.@3¾c. ℔ lb., live weight, and a good demand has used up all the stock.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.)—*r* indicates rain—*s*, snow.]

JULY.

1......66	8......71*r*	15......71*r*	22......62	29......69*r*
2......59*r*	9......72	16......71*r*	23......60*r*	30......68
3......55*r*	10......69*r*	17......68	24......64*r*	31......68
4......60	11......62	18......64	25......65*r*	—
5......63	12......60	19......59	26......65	Aver'ge 65°
6......72	13......65	20......65*r*	27......64	
7......77*r*	14......69	21......65*r*	28......65	

AUGUST.

1......66	4......73*r*	7......68	10......74	13......67
2......69	5......72*r*	8......70	11......67	14......63
3......70	6......71	9......77*r*	12......74*r*	15......70*r*

The Weather has, for the most part, been warm, with just sufficient rain to keep vegetation in a good healthy and rapid-growing condition. The hay and grain crops were gathered in good order, and corn and other field and orchard crops are coming on finely, with every prospect of a bountiful harvest, as shown by our crop reports, page 282. OUR DAILY NOTES, condensed, read :——July 19, clear, fine—20, cloudy, light rain P. M.—21, 22, cloudy—23, cloudy, heavy N. E. rain-storm at night, continuing lightly 24th—25th, cloudy A. M., clear P. M.—26, clear, warm, heavy rain at night—27, 28, clear, fine—29, clear A. M., shower P. M.—30, 31, clear, warm. August 1, 2, 3, clear, hot—4, warm, light showers—5, clear, hot, heavy thunder-shower at night, soaking the ground thoroughly, and doing abundance of good—6, 7, 8, clear, hot—9, hottest day of season, mercury 92° to 96° in the shade, showers at night—10, 11, clear, fine—12, clear A. M., thunder-shower P. M.—13, 14, clear, cooler, showers at night of 14th—15, cloudy A. M., clear P. M.—16 to 19, clear, fine weather, with a touch of Autumn.

An American Exhibition
OF
Pumpkins, Squashes, and Ornamental Gourds.

There will be a Public Exhibition of **Pumpkins, Squashes, and Ornamental Gourds,** at the office of the *American Agriculturist*, 41 Park Row, New York City, opening on Wednesday, Nov. 5th, 1862, at which the following prizes will be paid by the Publisher, upon the official award of competent Committees.

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I.	For the *Heaviest* Pumpkin or Squash...	$20.00
II.	For the 2nd do. do.......	10.00
III.	For the 3d do. do......	5.00
IV.	For the Best do. do. for cooking..	10.00
V.	For the 2nd Best do. do. do. ...	5.00
VI.	For the largest yield on a single Vine.*...	10.00
VII.	For the 2nd do. do. *..	5.00
VIII.	For the largest and finest collection of Fancy or Ornamental Gourds*......	10.00
IX.	For the 2nd do. do. *......	5.00

* All to be grown by one person and to be accompanied by an affirmed statement from the grower, and two disinterested persons who assist in gathering the specimens.

Note 1.—The specimens receiving the Prizes will remain on Public Exhibition at the pleasure of the Publisher who offers the prizes. The other specimens will be subject to the order of the exhibitors, or they will be sold at Auction or otherwise disposed of, for their benefit.

Note 2.—All Exhibitors must notify us of their intentions by Oct. 10th, and deliver specimens for competition on or before Nov. 3d. Specimens to be delivered free of charge.

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M. C. WILD, Secretary.

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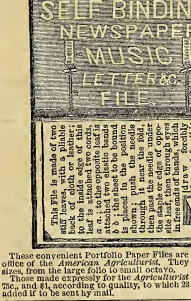

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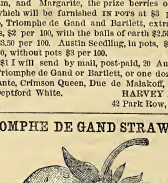

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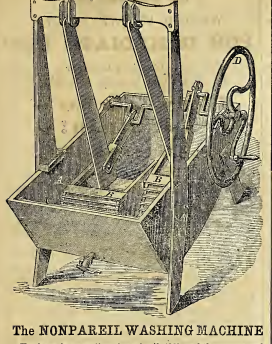

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Many more of our present patrons will of course go to the war, and we desire to ask the aid of those who do not, in securing new names to fill up the subscription lists. We mean to make the paper eminently *useful* to every one who cultivates a rod of ground, as well as to every housekeeper, and to every child. To those who get up clubs, we offer the best remuneration we can. See list of valuable premiums on page 281.

We desire an ARMY of new readers to *see* this journal before January, for each one who does so, will, we think, help secure *others* to begin the next volume.

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☞ See the Last Page, this month.

October.

"What though the fruit tree rival not the worth
Of Artcanian products? Yet her freight
Is not contemned; yet her wide branching arms
Best screen thy mansion from the fervent day
Adverse to life; the wintry hurricanes
In vain employ their roar; her trunk unmoved
Breaks the strong onset, and controls their rage.
Chiefly the Roxbury, whose large increase,
Annual, in sumptuous banquets claims applause.
Thrice acceptable beverage! could but art
Subdue the floating lee, Pomona's self
Would dread thy praise, and shun the dubious strife."
PHILIPS.

If the apple is the fruit for the million, the pear is the fruit for the amateur. If the one should be planted in large orchards, the other should find its home in the garden and fruit yard about the dwelling. There is a reason for the enthusiasm with which this fruit is regarded by all pomologists, aside from the profits which it yields to nurserymen and to those who grow it for market. Though something called pears were known to the ancients, the delicious dessert fruit, now known by that name, is a modern 'invention.' We read of pears in Virgil and Pliny, and other old Roman writers. What the fruit was, is readily inferred from the confession of the latter author, "all pears whatsoever are but a heavy meat, unless they are well boiled or baked." It was not until the seventeenth century, that pears made much progress. What that progress is any one can decide, who tastes a crabbed perry and a Seckel, and compares the juices. If the one gripes his throat and compels wry faces, the other leaves behind an aromatic sweetness, suggestive of the food of the gods. A fruit so capable of improvement in size and quality, very naturally awakens the enthusiasm of cultivators—orchardists and amateurs. It unquestionably requires more skill, at least in the older States, to grow good pears, than good apples. The latter will flourish with little care after being once established. The former, especially if dwarfed upon the quince, must have a good soil and skillful cultivation to make it reward the planter. It pays abundantly for generous feeding and skillful handling, and perhaps it is owing in part to this fact that it is the special pet of some of our distinguished pomologists. It heralds the fame of the fruit grower, and a man becomes distinguished according to the number of varieties and the size of the specimens of this fruit which he exhibits at the fairs, as in the olden time he became famous according as he lifted up the ax against the thick trees of the wood. Tree-slaying has become infamous, and he that would shine in fairs in modern times, must not only know how to select, but how to plant and prune, and feed pear trees.

The rareness of fine varieties of this fruit has made it an object of special desire to the cultivated and refined. It is somewhat a badge of social distinction, like diamonds and rare wines. Not one family in a thousand in this land of plenty has ever had a dish of this fruit at its best estate served for dessert. Virgalieus and Seckels are even rarer than wine, though our nurseries have sent forth trees by the thousand and tens of thousands, for the last score of years. Every genteel family living pernanently in the country, or residing there for the Summer, plants dwarf and standard pears of approved varieties. Madam covets the fruit dish loaded with Bartletts, or Flemish Beauties, as she would splendid silver for her table. The silver is much more common at dinner than fine pears. It is a social triumph when our dwarfs are a success, and the pets of the fruit yard furnish a supply of melting pears for Summer guests.

Whatever the cause, the pear has a popularity beyond any other of the larger fruits. Downing glories in it, in prose more eloquent than song, and the discussions of highest interest in the meetings of our Pomological Societies are upon this fruit. With failures more numerous than successes, in planting dwarfs, people keep planting them, determining with resolute Anglo Saxon courage to educate themselves into success. In its natural state, the pear is more hardy and long lived than the apple, reaching in rare cases the age of four hundred years. Though an exotic in this country, it is probably as vigorous and healthful here as in its native clime. The Stuyvesant pear tree still fruitful after two hundred years of bearing, is a good witness of the hardiness and the long life of this fruit.

The causes of failure, especially with the dwarfs, are easily pointed out. More of them are from improper planting and from neglect than from all other causes. They are often set out upon land too poor to nourish them. They live, but make no new wood. They are thrown prematurely into bearing by transplanting, and the cultivator, pleased with the early fruitfulness, lets them bear all they will. The whole force of the tree is thrown into fruit, and after a few years it is exhausted and dies. Sometimes the tree is planted too high, the quince stock being three or four inches above ground, instead of beneath, as it should be. The borer attacks the quince, and if neglected, soon destroys it. We have frequently seen them planted in green sward, the grass taking all the strength of the soil, and the trees looking much like walking canes, years after planting. Sometimes they are not manured at all. The demand is for abundant compost manuring every fall. Again, they are trimmed up as high as one's head, before they are suffered to make limbs. With the comparatively weak roots of the quince, this gives the wiuds a great purchase upon the tops of the trees, and unless they are staked up they are soon broken off. The demand is for limbs near the ground, forming a pyramidal base, to rise not more than a foot a year until the structure gets beyond the reach of the pruning knife.

The well-trained dwarf is a creation of human skill, as much so as any work of the architect. If a man does not know how to build, or can not take the time to learn, let him eschew dwarfs as too small business for him. Standards are more easily reared and much longer lived. They pay quite as well for good soil and cultivation. They are much longer in coming into bearing, some varieties requiring fifteen years of good cultivation before they will give forth their treasures. But when once they break into fruit, they make up for lost time, and are a fountain of delight to the fruit grower, for the rest of his life, and a monument to his memory when he is dead. As the season of planting again returns, we throw out these few hints in regard to the favorite fruit of modern times. Notwithstanding the war and the duty of thirty per cent., pear trees will continue to be imported and planted. Let the work be well done.

THE WAR AND FEMALE FARMERS.—We are constantly hearing, especially from the West, of instances where farmers have patriotically exchanged the plow for the musket, encouraged to do so by their wives who have cheerfully assumed the care and responsibility of conducting the labors of the fields during their absence. Such noble women deserve not only the good will of their neighbors, but their kindest attention. Let them want in nothing of friendly advice, and oversight against imposition in the sale of their produce, and in the purchase of supplies. See to it that they have the aid of a "husking bee," a wood-cutting gathering, and any other assistance that can be rendered to them. Farmers' Clubs should take such cases under their special care. Our aged correspondent, Diogenes, has a talk about a woman farmer on another page of this month's *American Agriculturist.*

Calendar of Operations for Oct., 1862.

[A glance over notes like the following will generally call to mind some piece of work that would otherwise be forgotten or neglected. The remarks are more especially adapted to places between 38° to 42°, but will be equally applicable further North and South, by allowing for latitude.]

Farm.

But few days will now intervene before the "Advance Guard," of stern Winter will make a descent upon us, and Col. Frost and his Snow Brigade will make fearful "havoc" among the stores of those unprepared for the "raid." Farmers must marshal their forces at once and exercise a watchful care against this invader. They must volunteer their efforts, and not wait to be driven or "drafted" into the contest. Remissness is sure to lead to defeat. "A penny saved is worth two earned," and no season of the year affords the farmer a better opportunity to reap the benefit of this great truth than the early portion of the month of October. In the Northern regions root crops must be gathered and marketed or securely stored; sorghum must be harvested and manufactured into syrup or sugar; corn must at least be cut up and placed into stooks; buildings must be erected, repaired and put in a good state of preservation; implements must be housed for a season of rest, and should be painted and oiled to preserve them from decay and rust; stock must have extra feed to prevent loss of flesh, etc., etc.

Agricultural Exhibitions are still to be held in many localities, and those who read the *Agriculturist*, and consequently raise the best crops and stock, and reap the largest ratio of profits, will not fail to be on hand to exhibit the evidences of their skill, and to obtain hints that will enable themselves to do still better another year. The farmer who never goes to the Fairs usually drives a miserable team, has "bad luck" with his crops and everything else; and "Hard Times" never abed him.

Barns—The suggestions given last month are still applicable, and should not be neglected.

Beans—Shell as soon as well dried, and clean thoroughly. The stalks are good fodder for both sheep and horses.

Beeves require increased care and feed. Pumpkins, immature corn, surplus cabbage leaves, will be acceptable to them, and prepare them for "finishing off."

Buildings—Erecting new, and repairing and painting old, preparatory for winter's storms and frosts, must be attended to promptly. Good shelter for stock pays a large per cent., in the saving of fodder. Food is the fuel which keeps up internal heat; the less exposure, the less the internal heat and consumption of fuel required.

Butter—Lay up a good supply, well made, thoroughly worked, and carefully packed. (See page 278 last month.) Keep up the supply of milk by feeding oil cake, cabbages or carrots to the cows, where pasturage is becoming short.

Cabbages must be taken care of before liable to injury by freezing and thawing. Freezing will not injure them materially, if so enveloped in earth or otherwise that they will remain frozen until wanted for use. They must have a very cool place to prevent decay, and they will not therefore keep well in cellars. Trenches, with a couple of rails laid on the bottom, are best. Place the heads of the cabbages on the rails, with roots up, then put a layer of straw against either side, cover with earth and pack smooth so as to shed rain as much as possible.

Cellars—Cleanse and ventilate as directed last month.

Carrot tops as well as roots are good for milch cows.

Cisterns—Cleanse and repair at once wherever needed.

Corn—The best ears may still be selected for seed, though for earliness the selection should have been attended to when the corn first began to ripen. Cut up, bind and stook for husking, if not ready to husk now.

Draining—Water should not be allowed to stand during winter on grain fields. Underdrain if possible, otherwise (unless the clay substratum can be bored or dug through) surface-drain with furrows or ditches well opened.

Farmers' Clubs—The evenings are lengthening and most farmers will soon have spare time, some of which may well be devoted to meetings for mutual benefit. Let each unit strive for the proud distinction of producing the best crops and stock in the world, or at least in his own neighborhood. Apportion experiments among the members and endeavor to earn for the club the credit of having originated something for the benefit of American Agriculture, as well as for themselves. Well directed and persevering effort often produces wonderful results. Let not the effort be wanting.

Forest leaves are excellent for absorbing liquid manure and for mulching. Gather them freely when available.

Grain—Thrashing, cleaning, storing and marketing must be attended to. Do the cleaning thoroughly. An extra winnowing may greatly increase the market value.

Hogs may be made to answer two purposes, manufacturing manure for the garden, and supplying pork for the table. Give them muck, soda, leaves, straw, etc., for the former, and good cooked food and clean water for the latter. It pays well to give frequent scrubbings to ensure cleanliness and thrifty growth.

Ice Houses rightly constructed and well filled are conducive to profit and comfort. (See remarks on page 297.)

Implements should be carefully secured against accident, rot and rust. Iron and steel will be kept from rust by smearing them with lard and resin melted together.

In-door Work should have the benefit of labor-saving implements—a sewing and a washing machine, wringer, churn, apple-parer, knife and scissors-sharpener, etc. Wives are too often over-tasked. Severe exertion should not be added to the incessant cares and steps of the housewife from early morning until late evening. If a man should be "merciful to his beast," how much more so should he be merciful to his wife! In far too many cases these hints are *needed*, we regret to say.

Manures are the touchstone to profitable farming, (except in very rich new soils) and every available source should be profited by to the fullest extent. Muck, forest leaves, green weeds, straw, etc.—in short, every kind of vegetable matter—composted with animal droppings, are the very best, as well as the most easily obtained. Lime, plaster, salt, guano, etc., are more or less valuable, according to the soil. Bones are always valuable.

Paint wherever preservation can be promoted. (See recipe for cheap paint for out-houses, fences, implements.)

Plow—Turn up an inch or so of subsoil on heavy soils, when the ground is dry, and let Jack Frost have a chance at it. In this manner his services are very valuable.

Potatoes are injured by sunlight, by extreme heat or cold, and by want of ventilation; hence in storing they must have a dark, cool, and well ventilated place, with sufficient protection to prevent the least freezing.

Poultry—See article on page 268, Sept. *Agriculturist*.

Pumpkins—Sound ones may be kept until late in winter if protected from frost, dampness, and heat. Or they may be pared, sliced in rings of half an inch in thickness, hung on a pole in the kitchen or any warm place, and dried. The seeds should be removed from those fed to milch cows, as they are supposed to lessen the flow of milk.

Root Crops for keeping require protection from frost, dampness and warmth (except sweet potatoes). Turnips may be the last gathered, before freezing weather.

Rye may still be sown. (See page 276, last month.)

Schools—See that school houses are in good order, and use all proper efforts to secure good teachers, and a full attendance. A good teacher is cheap at any price; a poor one is dear even if he work for nothing.

Sheep—Keep rams and ewes separate until five months previous to the time you wish lambs dropped. For early lambs, put rams with ewes middle of this month, but as a general thing the middle of March is rather too early for lambs. From first to middle of May is better. Both rams and ewes for breeding should have good pasture now.

Sorghum—Strip off leaves a few days before cutting up the stalks. Cut off two upper joints with seed, as soon as ripe, or before heavy frost, and cut stalks just above lower joint at the same time. Preserve from frost and manufacture into syrup or sugar as fast as possible.

Timber for rails, posts, etc., is better cut now than later.

Orchard and Nursery.

The great yield of most kinds of fruit this season will tend to increase activity in the orchard and nursery business. This will be counterbalanced in some degree by the alarms and demands of war. Still we may expect considerable activity in the fruit-tree trade. We hope to be able to chronicle the realization of these expectations, for there can be no good reason to doubt that fruits are promotive of the health and comfort, as well as the prosperity of our people. Good trees are cheap now.

The falling of the leaves is the signal for transplanting trees, and some do not wait for this, but strip them off by hand. Should frosts be too long delayed, this may be advisable, in order to give the newly-planted trees time to become established in the soil before Winter sets in. Those who contemplate planting an orchard, be it of few trees or many, can not be too well informed as to how it should be done. If anything pays for doing *well*, it is fruit-tree planting. On the manner in which the tree is set out, may depend not only the degree of its thrift and fruitfulness, but its very life. It may be well for those who are not acquainted with this subject, to engage the nurseryman to plant the trees himself, and warrant them two years, where this is practicable. Elsewhere in this number will be found some general directions.

Fall planting is generally advantageous on account of time, which is easier spared in the Fall than in Spring, while all the hardy fruits, including grapes, currants, blackberries, etc., are found to do quite as well planted in the Fall. The soil settles about the roots, and the trees are ready to begin growing as soon as Spring opens.

Gathering fruit is an important item in the orchard labors for October, and its good keeping will depend materially upon the degree of carefulness with which it is handled. It is well to use a good fruit-picker, at least in gathering choice, late-keeping varieties.

Insects—Give them no quarter. Exterminate every vestige of the pests. Look after borers, eggs, nests, etc.

Label every tree, or, what is better, make a map of the orchard and put the name of each tree on the map. It is well to do both. Mice should find no harbor in grass or weeds around the trunks of fruit trees.

Manuring an orchard properly, requires a good deal of discretion. Experiment has proved that the soil for peach trees may be too rich; while on the other hand, pear-trees are gross feeders, and will mature abundantly. A compost of animal droppings, rotten leaves, sods, ashes, night-soil, etc., make a good pear-tree fertilizer, while chip manure and finely pulverized barn-yard manure in moderate quantities are excellent for apple trees. Lime is also almost universally beneficial to apple trees. Spread manures this month, and work them in in Spring.

Seeds and Pits—Plant at once, or store them in moderately dry sand until ready to plant in early Spring.

Stake up all trees liable to injury by winds. Be sure to heed directions for staking on p. 209, July *Agriculturist*.

Taking up nursery trees should be carefully done, to avoid injury to the roots, and those broken should be cut off smoothly and shanling from the under side outward. Immediately immerse in mud the roots of those to be sent to a distance, or for other reasons not to be immediately re-set. Reduce the tops of such as have broken or reduced roots. Damp moss or litter should be well packed and bound on around the roots of those to be sent to a distance.

Under-draining on heavy soils is always advantageous, and where needed no further delay should be suffered.

Kitchen and Fruit Garden.

The season for cessation of labors in the kitchen and fruit garden is near at hand, and what remains to be done should not be put off a single day longer than is absolutely necessary. Besides properly storing such of present crops as can not be used or marketed before frosts, there is much that may be done to enhance next year's profits, the most important of which is annihilating all weeds and turning up new subsoil (on all, and especially on clayey soils) to be amended by the action of frost and air.

Apples for keeping must be most carefully handled, even if very firm. Russets will bear gathering first, and other late-keeping varieties in succession, bearing in mind the liability of the large kinds about ripe, to danger by Fall storms and winds. Common kinds may be stored in a cool, dry room, though it is better to put them carefully into dry barrels. Choice specimens may be wrapped singly in clean paper and packed in dry chaff or bran.

Artichokes need Winter protection of earth or litter, before hard freezing, to be removed early in Spring.

Asparagus is better, and time is gained, if sown or the roots planted out early this Fall. The deeper and richer the bed the better. Set plants one foot apart each way, with the crown or branches below the surface.

Beans—Those unripe at the approach of severe frost should be shelled and dried by the sun or in an oven. Shell Limas and store in cool, dry place. House the poles.

Beets—Cut off tops and dry a little before housing.

Blackberries—New plots of this excellent fruit may be set this month—as soon as the leaves fall from the plants. Enrich soil with a compost of leaves, turf and well rotted manure. Set the large kinds, like the New-Rochelle, 4 feet distant in rows 8 feet apart. Protect the young canes the first year with straw or manure, if liable to much freezing and thawing. Plants may be grown from seed, but the variety will be uncertain.

Cabbages—The hardy kinds may be wintered by simply re-setting close together and covering with a few inches of loose litter. Tenderer kinds should be set in trenches, head down, on a couple of rails, and the roots well covered with straw and earth. Sow seed in cold frames for early Spring plants.

Carrots—See directions for beets. See also "How to Harvest Carrots," page 300. Pies are made by grating raw or stewed carrots, passing the pulp through a sieve, and then proceeding the same as with pumpkin sauce.

Cauliflowers may still be sown in cold frames.

Celery—Remove decaying leaves, and earth up with dry soil before danger from frost. Keep dirt from between the leaves by holding them together. Celery must be kept dry and cool, and protected from frost.

Cold frames may still be made in time for profitable use.

Currants and Gooseberries—Plant out last of month.

Fruit Trees—Transplant last of this month, and take time to do it well.

Grapes—Gainer as fast as ripe, remove all defective berries from those bunches you wish to keep, and pack in a dry, cool place, between layers of cotton batting. For wine-making see page 277, September *Agriculturist*. Set new roots last of this month.

Lettuce—Sow in cold frames. Remove late sown to cold frames before severe weather, or protect with clean litter that will also hold snow.

Onions—Sow in very rich, light soil, in drills a foot apart. Give slight protection of litter. These will start very early in Spring.

Parsneps wanted for Winter use should be dug, topped and buried in sand in the cellar. Leave others where they grew, until Spring. They are improved by freezing.

Pickles—Pack unripe tomatoes, melons, peppers, etc., in salt for pickling.

Rhubarb—Plant new roots and seed, the last of this month.

Salsify or Vegetable Oyster—Treat exactly as directed for parsneps.

Spinach—Thin out young plants and give a slight protection before heavy frosts.

Strawberry Beds—Make new ones immediately and cover before hard freezing. Sprinkle new and old beds with wood ashes, and cover lightly with tan bark, forest leaves or straw.

Sweet Potatoes—Pack in very dry sand and keep in a warm place.

Tomatoes—Fruiting may be prolonged by keeping off frosts with light protection—such as thin cloths, etc.

Trenching—Do this now wherever needed. Few are the gardens in which it will not pay. Deepening—not over-turning—the soil, should be aimed at.

Turnips—Late varieties may be permitted to remain and grow until another month.

Flower Garden and Lawn.

As Winter approaches, the flowering shrubs and plants in bloom become reduced in variety, so that in October dahlias, gladioluses, and chrysanthemums occupy nearly the entire field of hardy plants; yet, with proper care and taste in selecting varieties, removing all decaying leaves and other unsightly objects, and arranging for effect, these may be made quite efficient in gratifying the love of the beautiful. Attending to these, cleaning up flower borders, sowing and transplanting perennials, potting bedded plants, setting bulbs, saving seeds of late bloomers, protecting or removing tender varieties to flower pits, greenhouse, cellar, or window, planting shrubs, trenching and seeding, or turfing lawn, and transplanting ornamental trees, constitute the main labors of October, in the flower garden and lawn department.

Bedded Plants—Take up and pot petunias, verbenas, fuchsias, geraniums, salvias, etc., for winter blooming. Make cuttings, and place in boxes or pots of light sandy soil at once.

Bulbs may be planted at any time from September to December, but are better when put in early. Plant in any good garden soil, covering from two to four inches. (See article on page 273, Sept. *Agriculturist*.)

Chrysanthemums are now in the hight of bloom, and their rich colors and varied and delicate shadings render them very attractive. Keep carefully staked to prevent injury by Autumn winds, and promptly remove all decaying leaves, etc. Mark choice blooms to divide and re-set roots in Spring.

Dahlias and Gladioluses—Treat as directed for Chrysanthemums, except to remove to a cellar or other dry place where they will be protected from freezing.

Frames and Pits—Prepare for the early reception of plants. (See illustrated article on page 273, Sept. *Agriculturist*.)

Perennials—Hollyhocks, wall-flowers, etc., do well if sown first of this month.

Lawn—Trench or subsoil and manure where needed. In turfing, beat sods well down, and fill all crevices with fine soil or sand. Sow early, and roll immediately after sowing, and again just before Winter. Perennial ryegrass is esteemed for lawns, but Kentucky blue-grass suits us best.

Pinks, Carnations, etc.—Pot rooted layers and young plants for removal to pit or green-house before frost.

Shrubs—Plant hardy, early-blooming varieties.

Green and Hot-Houses.

Directions of last month apply in the main to this also. As the exact time of first severe frosts can not be foretold, and *may* occur much earlier than usual, there should be no delay in securing from injury all tender plants which it is desirable to preserve. Guard against sudden changes in temperature, keep the houses well ventilated, and induce a degree of humidity within, by judicious sprinklings or syringings of water. Place the tender plants in the safest locations, with reference to uniform warmth of temperature.

Annuals—Sow a few quick-growing sorts to come into bloom in mid-winter.

Insects should be promptly exterminated upon first appearance.

Apiary in October.

Prepared by M. Quinby—by request.

The bees will add nothing to their stores the present season, except in localities where but few are kept, and the Golden Rod and Wild Aster abound. The brood is mostly matured, and now is the time to decide what to do with each stock. Good stocks contain a strong colony, and plenty of honey, say 25 lbs. When doubtful as to their condition, weigh them. Some judgment is needed to decide about the number of bees. If the hive is very full of honey, the bees will be crowded to the bottom, and will appear to be more numerous than they really are. When combs are full of foul brood, the bees are crowded to the bottom in the same way. But when the combs are ordinarily stored, the bees will be near the bottom, and extend through all of them. Such usually winter best. When stores of honey are a little short, the bees will be further up among the combs, and a large colony may appear quite small. These things should be thought of, that no mistakes be made. If deficient stocks are to be kept, select first such as have bees and combs enough, and supply honey to others. When bees are wasting, there are generally enough of the condemned ones that must be sacrificed, to supply them.

There may be some old stocks found that are yet queenless, with abundant stores. Introduce a good colony with a queen now, if free from worms, and convert it at once into a stock for winter. It does not always make the best, but it is the best use to which such can be applied. If honey from the south, or that from hives containing foul brood is fed, it should be cleansed by scalding, adding a little water to prevent burning. All the feeding should be done quickly, and with especial care to prevent robbing.

The honey market is most active this month and next. Take off all dripping honey from the outside of the boxes with a wet cloth; paste heavy paper, or thin muslin over the bottom holes to cut out insects and dirt. Put up large boxes, that will hold what can be easily handled. Secure it from sliding about, and handle with extreme care. Full prices can not be obtained for broken combs.

Exhibition Tables at the Office of the American Agriculturist.

The following articles have been placed on our tables since the report for last month:

FRUITS.

The largest and finest collection of Apples and Pears by any exhibitor has been shown by Wm. S. Carpenter, of Rye, N. Y. It consists of over 90 varieties, including the choicest of named sorts. Size, color and specimens have been contributed by others, as follows:

Apples.—Gravenstein, Early Strawberry, Garretson's Early, Hawthornden, Melon, Summer Pearmain, Porter, Twenty Ounce, Rhode Island Greening, Sweeting, Golden Sweet, from Parsons & Co., of Flushing, L. I.... Red Astrachan, Summer Queen, Golden Russet, Pine, from Dr. Ward, of Newark, N. J.....Alexander, Nonsuch, from C. P. Russ, of Staten Island....Gravenstein, from T. Whitbeck, of Yaphank, L. I.... Suffolk Beauty, Sweeting, from Edward L. Brown, of Deer-park, L. I.....Primate, from A. M. Halsted, of Rye, N. Y..... Variety for name, from Theo. Van Perg, of Rahway, N. J..... Strawberry, from B. C. Wyckoff, of Bergen, N. J.....Variety for name, from Jas. L. Lockwood, of Stamford, Conn.... Northern Spy, Baldwin, from Matthew Armstrong, of South Bergen, N. J.....Varieties for name, from Jas. Brown, of Morrisania, N. Y.....Alexander the Great, Summer Queen, from Geo. Ludington, of Ludingtonville, N. Y.....Alexander, (one of four grown on tree 8 feet 7 inches high) from C. H. Lillienthal, of Yonkers, N. Y.....Specimens, from Phillip Frank, 530 Broome street, N. Y.....Porter, Primate, 2 varieties for name, and others from E. Williams, of West Bloomfield, N. J.....Sweet Bough, Branch of Siberian Crab, from J. R. Whiting, of Spuyten Duyvil, N. Y.....Bunch of 12 apples, from G. M. Diller, of Port Richmond, Staten Island.....Nonpareil, from E. S. Y. Wright, of Forest Home, N. J.....Sour Bough, from J. C. Hart, of Shrub Oak, N. Y.....Cherry Crab, from Wm. Churchill, of Smithtown, L. I.....Two branches Crab, from A. J. Hall, N. Y.....Varieties for name, from A. J. Caywood, of Modena, N. Y.....Varieties for name, from Wm. Churchill, of Smithtown, L. I.....Variety for name, from Mr. Paterson, of Perth Amboy, N. J.

Pears.—Flemish Beauty, St. Ghislain, Knight's Seedling, Summer Franc Real, Kirkland, Bezi de la Motte, Julienne, Beurre Blanc, Frederick of Wurtemberg, Andrews, Paradise d'Automne, Summer Bergamot, Beurre Chirgean, Brandywine, Moulle Bouche, Golden Beurre, Stevens' Genesee, Beurre Rance, Howell, Henkel, from Parsons & Co., Flushing, L. I.....Sterling, Doyenne Boussock, Bartlett, from Dr. Ward, Newark, N. J.....Belle de Bruxelles, from Theo. Van Perg, of Rahway, N. J.....Church, Partomen, Flemish Beauty, and a variety for name, from D. F. Welch, of Bergen, N. J.... Beurre d'Amaulis, from Mr. Eakin, of Staten Island.....Bartlett, Beurre Chirgean, Seckel, Monsieur Johns, varieties for name, from Mr. Paterson, of Perth Amboy, N. J.....Bartlett, Flemish Beauty, Urbaniste, Andrews, Belle Lucrative, Lawrence, Seckel, Louise Bonne de Jersey, Glout Morceau, Vicar of Winkfield, Maria Louise, from Matthew Armstrong, of South Bergen, N. J.. 5 Bartletts (magnificent, weighing 2 lbs, 4 ozs.), from R. Leavitt, of Flushing, L. I.....Variety for name, from J. L. Worth, of Bayswood, L. I.....Beurre d'Amaulis, from C. Rogers, Enfield, N. J.....Variety for name, from R. J. Dodge, Montclair, N. J.....Dearborn Seedling, Bartlett, from L. C. Hatch, of Scotch Plains, N. J.....Variety for name, from J. Holt, of Havcrstraw, N. Y.....Beurre d'Amaulis, (branch bearing 61 *fine* pears—imported dwarf grafted on standard), Louise Bonne de Jersey, Stevens' Genesee, Flemish Beauty, Church, Belle Lucrative, Bartlett, Water Melon, Seckel, Huntington, Bleeker's Meadow, Pig Pen, Duchess d'Angouleme, Vicar of Winkfield, Beurre Bosc, a variety for name, from A. M. Halsted, of Rye, N. Y. Doyenne Boussock, Sens Pan, variety for name, from L. A. Brush, Long Island.... Washington, from A. B. Fuller, of Brooklyn, L. I.....Varieties for name, from R. Lewis, of Brooklyn, L. I.....Beurre Chirgean, Louise Bonne de Jersey, from Mrs. C. M. Kirtland, N. J.....Dearborn Seedling, Flemish Beauty, Tyson, Bartlett, from Wm. Chorlton, of Staten Island.....Seedling, from E. E. Clarke, of New Haven, Conn.....Variety for name, from Mr. Livingston.....Beurre d'Amaulis, Flemish Beauty, Bartlett, variety for name, from Jos. L. Noble, of Brooklyn, L. I.... Variety for name, from B. Conover, New York.....Stevens' Genesee, Bartlett, Belle Lucrative, New Frederick of Wurtemberg, Andrews, Beurre d'Anjou, varieties for name, from L. Mason, of Orange, N. J.....Andrews, Flemish Beauty, Bartlett, from Mr. Child. New Market, N. J.....Bartlett, Flemish Beauty, Doyenne Boussock, Beurre Chirgean, Surpasse Maria, Belle de Jerseys, Beurre Foughiers, variety for name, from J. K. Gibson, Keyport, N. J.....Specimens, from Thos. B. Stimson.....Varieties for name, from M. M. Hurd, of Brooklyn, L. I.....Bartlett, Seckel, variety for name, from Jacques Van Brunt, of New Utrecht, L. I.....Seckel, from Ed. Humbert, Brooklyn, L. I.....Doyenne Boussock, variety for name, from T. B. Stilman, of Flatnicki, N. J.....Beurre d'Angouleme, New Frederick of Wurtemberg, Flemish Beauty, from C. Reeve, of Southold, L. I.....Virgalieu, variety for name, from Mr. Lawrence, of Hyde Park, N. Y.....Beurre d'Amaulis, from Daniel Coe, New Paltz Landing, N. Y.....Variety for name, from J. Hague, of Bloomfield, N. J.....Bartlett, variety for name, from R. Williams, of West Bloomfield, N. J.....Beurre d'Amaulis, from H. C. Ward, of Newark, N. J.....Bartlett, Seckel, from B. T. Sealey, of South Yonkers, N. Y.....Variety for name, from T. B. Reed, of Flushing, N. J.....Bartlett, from J. R. Whiting, of Spuyten Duyvil, N. Y.....Doyenne Boussock (very fine), from J. R. Rapelye, of Astoria, L. I.....Bartlett, from J. H. Stuart, of Stapleton, N. Y.....New Frederick of Wurtemberg, Doyenne Boussock, Flemish Beauty, Bartlett, Beurre d'Amaulis, varieties for name, from John C. Hart, of Peekskill, N. Y.....Collection of pears for name, from H. L. Terry, of Brooklyn, L. I.....Bartlett, and others, from Thos. Andrews, of West End, N. J.....Variety for name, from Mr. Wyckoff, of Bergen, N. J.....Varieties for name, from Rev. J. Weaver, of Fordham, N. Y. Varieties for name, from Dr. R. Morrison, Spring Valley, N. Y.....Hacsmas, variety for name, from P. L. Bogert, Brooklyn, L. I. .....Variety for name, from C. A. Whitney.....Beurre d'Amaulis, from J. H. Ruptst, of Hudson City, N. J.....Bartlett, from Mr. Ayres, of Astoria, L. I.

Grapes.—De Candolle, Delaware, from Parsons & Co., of Flushing, L. I.....Rebecca, Hamburg, Wilmot's Hamburg, Bowker (white), from Matthew Armstrong, of South Bergen, N. J.....Wild Grapes (large), from George O. Street, Mt. Vernon, N. Y.....Hartford Prolific, from Mr. Child, of New-market, N. J.....Variety for name, from Geo. W. Prince, of Brooklyn, L. I.....Delaware, Diana, (open air, a little earlier than Delaware) from E. Hergt, of Rye, N. Y.....Black Hamburg, Sweet Water, from C. Mandewirth, of Fishkill, N. Y.

Plums.—Green and Yellow Gage, ten varieties for name, from E. Williams, of West Bloomfield, N. J.....Variety for name, from J. M. Stevens, of Long Slip, N. Y.....Green Gage, Coe's Golden Drop, Black Plum, from L. Mason, of Orange, N. J.....Gage, from Jas. Quick, of Brooklyn, L. I.....Sine varieties of Seedlings, from Mrs. Thos. Young, of Long Slip, L. I. .....Bolmar's Washington, variety for name, from J. H. Demarest, of Washington Heights, N. Y.....Bolmar's Washington, from Samuel Cooper, of Tompkinsville, Staten Island.....Gage, from E. S. Lamoreaux, Basking Ridge, N. J.....Branch Green Gage (3 plums, 2 inches, 2 inches, grown on tree 8 years), from Clarence Sidell, of Classon Avenue, Brooklyn, L. I.....Four branches (amazingly full—*fine fruit*), from Dr. S. I. Chase, of Lockport, N. Y.....Lawrence, Variety for name (very fine), from Mrs. Lathrop, Saugerties, N. Y.

Peaches.—Seedling for name (named Hinchman's Seedling) weight 7½ ozs. from tree 12 or 14 yrs. old, grown in Brooklyn, L. I., from J. J. Hinchman, 26 Yeager st., New York.....Van peach, from Sulphin Lyon, of Washington Market, New York. .....Carman Peach, from Wm. S. Carpenter, of Rye, N. Y. Seedlings, from Henry Smith, St. James, L. I.

OTHER FRUITS.—*Nectarines.*—Red Roman (very fine) from Frederick Seitz, of Easton, Penn.....Specimens (fine—grown in the city), from Mrs. Lathrop, of New York.....*Prunes* from Capt. Reimer, of Orange, N. J.....*Strawberries.*—Jenny Lind (second crop), from A. S. Fuller, of Brooklyn, L. I.....*Blackberries.*—Dorchester (*Lawton*—large, or else new-fine), from John Cole, of Tompkinsville, Staten Island.....*Tomatoes.*—Red Smooth, Red and Yellow Pinm, Currant, Fejee Island, Plum Tree, and new variety (half yellow and half red) from W. F. Heina, of Woodstock, N. Y.....Cuban, Fejee, Tree, and a new variety, (half yellow and half red) from Geo. M. Suffer, of Port Richmond, Staten Island.....Specimens (large and fine), from W. H. Storrs, of Hudson City, N. J.....Mammoth, from John Cole, of Tompkinsville, Staten Island.....Mammoth, from J. Wilson, New Durham, N. J.....Mammoth, from J. H. Demarest, of Washington Heights, N. Y.....Trinity from Walter Johns, of Passaic, N. J.....Italian, and bunch weighing 12 pounds, from Mr. Fitzgerald, gardener to Gen. Henry Stornes.....Tree (in pot), from Frederick Seitz, of Easton, Penn.....Specimens (singular growth), from Archibald Alexander Stevenson, of Altonwood, Westchester Co., N. Y.....West India, from L. A. Berte, of Tremont, N. Y..

Large specimens, from John Davidson, Washington Heights, N. Y.:—Yellow, Branch of Perfected, (very prolific and fine) from A. C. Chamberlain, of Novelty Gardens, Brooklyn, L. I.,—Large specimens, from B. F. Carpenter, of Newbrugh, N. Y.;—Mammoth, from A. Peyrot, of Tremont, N. Y.;—Italian, from A. M. Agens, of Orange, N. J.

VEGETABLES.

Three Garnet Chili Potatoes from single eye, (product of 12 potatoes weighed 38 lbs. with slight manuring) from J. Wilson, of New Durham, N. J.;—Japan and Chinese Beans, Hindostan Wheat, Chinese Egg Plant, Zea Caragua, or South American Corn (great growth), from Wm. F. Heins, of Woodstock, N. Y.;—Hops, Fancy Gourds, from Mr. Deserve, of Bergen Hill, N. J.;—Java Coffee, from B. McFarland, of Holbrook, L. I.;—Blood Beet (very large) from Benj. F. Seaver, of Orange, N. J.;—Chinese Egg Plant (in pot) from Frederick Seitz, of Easton, Penn.;—Corn, (curious growth) from Jas. Salter, Delmonico Castle, Brooklyn, L. I.;—La Guayra (raw) Coffee, from Mr. Willett, of Caracas, Venezuela, South America;—Vegetable Marrow Squash, Fancy Gourds, Oak Apple, from Charles Mandewirth, of Fishkill, N. Y.;—Hops, Fancy Gourds, from Mr. G. Usher, of Port Richmond, Staten Island, N. Y.;—Contraband Corn, from J. A. Brewer, of Westfield, N. J.;—Red Pepper (grown like Tomato) from J. A. Warman, of Westfield, N. J.;—Italian Chestnut, from Wm. Churchill, of Smithtown, L. I.;—Union Cucumber, from A. W. M. Hume, of Manhattanville, N. Y.;—Mammoth Twin Nutmeg Musk-melon (two grown together—perfect *Union*), Spanish Melon, Crooked Neck Squash, from Jas Van Dyke, of Flatbush, N. Y.;—Turban Squash, from Fritz Meyer, of 539 Third Avenue, New York.;—Fancy Balloon Gourds, from Thos F. Stewart, of Flushing, L. I.

FLOWERS.

Fine Double Balsams, Beautiful Pansies and Asters, and a splendid Double Zinnia, from Rev. J Weaver, Fordham, N. Y.;—Bloom of Cotton Plant, from F. Deserve, of Melrose, N. Y.;—Dahlias, Lilies, Double Zinnias, Roses, Gladioluses, Cut-flowers (very fine), from C. S Pell, of N. Y. Orphan Asylum.;—Asters, Dahlias, Lilies, Gladioluses, Zinnias, etc., from O. Judd, of Flushing, L. I.;—Double and single Sunflowers (extraordinary), from Henry C. Eno, of East Brooklyn, L. I.;—Sunflower (3½ inches in diameter), from Thos F. Stewart, of Flushing, L. I.;—Clethra Alnifolia, (wild flower) from John Jones, Hoboken, N. J.;—Wright's Datura, from T. W. Martin, of Williamsburgh, L. I.;—Dahlias, from Wm. Crowell, of Thompson, L. I.;—Dahlias, from Wm. E. Meserve, of Bergen, N. J.;—Asters, from H. C. Ward, of Newark, N. J.;—Amaranthus tricolor, Euphorbia variegata, Obelisceria Fulcherima, from an Amateur.

MISCELLANEOUS.

Branch of Tree with Oyster-shells attached (curious), from Wm. Stickler, of Newport, News, Va.;—Case of Honey (Quinby's Hives), from H. V. Crittenden, Bronxville, N. Y.;—Live Glow Worm.;—Balsam Apple, from John Mnerdten, of N. Y.

Fruit Growers' Meetings.

Large and Interesting meetings of Fruit Growers are now held at the office of the *American Agriculturist*, at 2 o'clock P. M., on Thursday of each week. Merchants doing business in the city, who have country residences, fruit growers from the neighboring localities, and even from distant points, farmers and others, come together for an hour or two, to test and discuss specimens of fruit, give names to unnamed fruits sent, talk over best kinds, and modes of growing—a pleasant and instructive meeting is the result. Our Tables are constantly loaded with from 250 to 300 plates of different fruits in their season. Flowers, vegetables, all sorts of soil products, and implements which are interesting or instructive, are invited on Exhibition at all times, and the public are invited to drop in on any day and at any hour whenever convenient. We have not room to report the doings at the Weekly Meetings, though some interesting points are brought out which it will be useful to publish hereafter. Separate items will be found in "Our Basket," and elsewhere, from time to time, as circumstances shall seem to require.

Save Fruit for the Soldiers.

An intelligent gentleman of this city, who knows by experience something of camp life, says, tell all the readers of the *American Agriculturist* that nothing is more acceptable to soldiers while confined to their army rations, than dried apples, and other fruits, which are easily carried in compressed bulk, and can be soaked and stewed with only the camp conveniences. There is an abundance of fruit, and, in addition to list, bandages, socks, etc., let every community prepare a lot of well peeled and well dried apples, peaches, etc., to forward as opportunity offers, to some favorite regiment or company, or to a central depot which we hope to have established in this city for this special purpose. Get the fruit ready, and a way will be opened for its use where it will be most acceptable. If no other way opens send it to the *Agriculturist* office, and we will forward it to any point desired.—After writing thus much, the gentleman referred to, added: "Yes, tell them to send the dried fruit here, if they have no other way to forward it, and my workmen and workwomen will repack it. my carts will do all the moving in the city, and I will bear all expenses of getting it from here to the soldiers' camps." He requested us to withhold his name. (The first citters are C. H. L.) Let these donations be plentiful.

American Pomological Society.

The Ninth Biennial Meeting closes at Boston, just as we go to press, and we have only room to say that the gathering of fruit-lovers was large, the discussions interesting, and the show of fruit, especially of pears, the largest ever brought together in the country. This was to be expected from the present great fruit year. Among the individual collections were: some 300 varieties by Prest's. M. P. Wilder; nearly 300 by W. Read, of New-Jersey; 250 by Ellwanger & Barry, who also exhibited 250 kinds of apples, and 75 varieties of plums; 250 varieties of apples by T. T. Lyon of Mich., many of them very large and of superior excellence. Other large collections were shown by Hovey & Co., Hooker & Co., of Roehester, and Wm. S. Carpenter, of N. Y.—Hon. M. P. Wilder, was re-elected President, and Jas. Vick, Sec. An address by the President, and remarks by Col. B. P. Johnson, giving an account of his visit to the London Exhibition, were listened to with interest.

Agricultural Exhibitions, Oct., 1862.

A large number of Fairs are in progress, as we go to press, and apparently with a fair degree of success, notwithstanding the war excitement. Below is a list of Fairs to be held in October, so far as we have been able to ascertain the particulars.

STATE FAIRS.

Name.	*Where held.*	*Date.*
Illinois	Peoria	Sept. 29—Oct. 4
New-York	Rochester	" 30 " 3
Iowa	Dubuque	" 30 " 3
Pennsylvania	Norristown	" 30 " 3
Indiana	Indianapolis	" 30 " 3
Oregon	Salem	" 30 " 3
New-Jersey	Newton	" 30 " 3
California	Sacramento	" 30 " 4
Connecticut	Hartford	Oct. 7—10

COUNTY FAIRS.

NEW-HAMPSHIRE.

Rockingham	Exeter (postponed.)	
Weare	Weare	Oct. 1—2
Hillsboro'	Milford	" 1—2
Carroll	Ossipee	" 2—3

MAINE.

West Washington	Jonesboro'	Oct. 1—2
Waldo	Belfast	" 1—3
West Oxford	Fryeburg	" 7—9
Androscoggin	Lewiston	" 7—9
Sagadahoc	Topsham	" 7—9
North Franklin	Phillips	" 8—9
North Somerset	Colon	" 8—9
Kennebec	Readfield	" 8—9
North Waldo	Unity Village	" 15—16

MASSACHUSETTS.

Berkshire	Pittsfield	Oct. 1—
Plymouth	Bridgewater	" 2—
Worcester South	Sturbridge	" 2—
Hampshire	Northampton	" 2—
Hampden	Springfield	" 7—
Bristol	Taunton	" 7—
Housatonic	Great Barrington	" 7—
Hampshire	Amherst	" 9—
Barnstable	Barnstable	" 15—
Hampden East	Palmer	" 14—
Worcester Southeast	Milford	" 14—
Martha's Vineyard	West Tisbury	" 21—

CONNECTICUT.

Windham	Brooklyn	Sept. 30—Oct. 2
Middlesex	Middletown	Oct. 1— 3

VERMONT.

Caledonia	St. Johnsbury	Sept. 30—Oct. 1
Addison	Middlebury	Oct. 1—2

NEW-YORK.

Washington	Salem	Sept. 30—Oct. 1
Greene	Cairo	" 30 " 1
Orange	Goshen	Oct. 7—10
Fulton	Gloversville	" 8— 9
Delhi	Delhi	" 8— 9
Dryden	Dryden	" 9—10
Schoharie	Schoharie	" 15—17
Albany	Albany, (postponed.)	
Onwego	Mexico, (postponed.)	
Rensselaer	——— (postponed.)	
Thompkins	Ithaca (postponed.)	

TOWN FAIRS.

Harpursville	Harpursville	Oct. 1— 2
Brookfield	North Brookfield	" 8— 9
Wilson	Wilson	" 9—10
Columbus	Columbus	" 13—15
Dundee Union	Dundee	" 15—17

NEW-JERSEY.

Burlington	Mount Holly	Sept. 30—Oct. 1
Hunterdon	——— (postponed.)	
Warren	Belvidere	Oct. 7—10

INDIANA.

Wabash	Wabash	Oct. 7— 9
Posey	New-Harmony	" 7— 9
Fulton	Rochester	" 10—11

DELAWARE.

New Castle	Wilmington	Oct. 7— 9
Kent	Dover	" 15—16

PENNSYLVANIA.

Lehigh	Allentown	Sept. 30—Oct. 3
Lawrence	New Castle	Oct. 1— 3
Snyder	Middleburg	" 1— 3
Indiana	Indiana	" 1— 3
Wayne	Honesville	" 7— 9
Crawford	Meadville	" 7—10
Luzerne	Wyoming	" 15—17
Columbia	Bloomsburg	" 15—18
Huntington	——— (postponed.)	
Union	Lewisburg, (postponed.)	

MICHIGAN.

Eaton	Charlotte	Sept. 30—Oct. 2
Monroe	Monroe	Oct. 1— 2
Macomb	Romeo	" 1— 3
Genesee	Flint	" 1— 3
Calhoun		" 1— 3
Lapeer	Lapeer	" 1— 3
Shiawassee	Owosso	" 2— 3
Hillsdale	Hillsdale	" 2— 4
Lenawee	Adrian	" 2— 4
Cass	Cassopolis	" 8—10
Jackson	Jackson	" 8—10
Oakland	Pontiac	" 8—10

OHIO.

Ashtabula	Ashtabula	Sept. 30—Oct. 2
Ashland	Ashland	" 30 " 2
Lake	Painesville	" 30 " 2
Shelby	Sidney	" 30 " 3
Champaign	Urbana	" 30 " 3
Lorain	Elyria	" 30 " 2
Portage	Ravenna	" 30 " 3
Guernsey	Cambridge	Oct. 1— 3
Hardin	Kenton	" 1— 3
Harrison	Cadiz	" 1— 3
Lawrence	Ironton	" 1— 3
Seneca	Tiffin	" 1— 3
Stark	Alliance	" 1— 3
Summit	Akron	" 1— 3
Trumbull	Oak Grove	" 1— 3
Wayne	Wooster	" 1— 3
Morrow	Mount Gilead	" 1— 3
Tuscarawas Valley	Masillon	" 1— 4
Logan	Bellefontaine	" 7— 9
Morgan	McConnelsville	" 7— 9
Muskingum	N. Philadelphia	" 7— 9
Richland	Mansfield	" 7— 9
Williams	Bryan	" 7— 9
Butler	Hamilton	" 7—10
Coshocton	Coshocton	" 8—10
Delaware	Delaware	" 8—10
Greene	Xenia	" 8—10
Stark	Canton	" 8—10
Union	Marysville	" 8—10

KANSAS.

Lawrence	New Lawrence	Oct. 1— 3
Jefferson	Oskaloosa	" 15—16

ILLINOIS.

LaSalle	Ottawa	Sept. 29—Oct. 1
Union	Warren	" 29 " 2
Jasper	Newton	Oct. 1— 3
Jefferson	Mount Vernon	" 1— 3
Shelby	Shelbyville	" 1— 4
Lee	Dixon	" 6— 9
Christian	Taylorsville	" 7—10
Warren	Monmouth	" 7—10
St. Clair	Belleville	" 7—10
Madison	Edwardsville	" 7—10
Greene	Carrollton	" 7—10
Edgar	Paris	" 7—11
Piatt	Monticello	" 8— 9
Fulton	Lewestown	" 8— 9
McHenry	Woodstock	" 8—10
Moultrie	Sullivan	" 8—11
Stephenson	Freeport	" 14—17
Monroe	Waterloo	" 15—17
Henderson	Oquawka, (postponed.)	

IOWA.

Bremer	Waverly	Oct. 8— 9
Jackson	Maquoketa	" 8—10
Cedar	Near Springdale	" 9—10
Cedar	Tipton	" 14—16

WISCONSIN.

Eau Claire	Eau Claire	Oct. 2— 3

CALIFORNIA.

Santa Clara	San Jose	Sept. 30—Oct. 3
Contra Costa	Pacheco	Oct. 7—10

CANADA.

North Simcoe	Barrie	Oct. 1—
North Leeds	Gananoque	" 1—
Waterloo. So Riding	Ayr	" 1—
Dugot	Ste. Rosalie	" 1—
Bonaventure	Maria	" 1—
L'Assomption	St. Paul l'Ermite	" 1—
Richmond	Danville	" 1—
South Simcoe	Bradford	" 2—
Stratford	Perth	" 2—
Dundas	Morrisburgh	" 2— 3
Waterloo No. Riding	Berlin	" 3—
North Ontario	Prince Albert	" 7—
Bonaventure	Main	" 8—
Grenville	Prescott	" 8— 9
Stormont	Cornwall	" 8— 9
Crosshill	Wellesley	" 9—
East York	Markham Village	" 9—
Niagara	Niagara	" 9—
Durham West	Bowmanville	" 9—10
South Wellington	Guelph	" 10—
North Wellington	Fergus	" 14—
West Northumberland	Grafton	" 15—
Addington	Newburgh	" 25—

NEW-BRUNSWICK.

Kings Co. Central	Hampton Ferry	Oct. 8—
Carleton	Woodstock	" 13—1
York	Fredericktown	" 14—15
Kingston Union	Kingston	" 23—

Containing a great variety of Items, including many good Hints and Suggestions which we give in small type and condensed form for want of space elsewhere.

THE READER'S ATTENTION, is invited to the business notices in this paper. Sundry General Premiums are offered on pages 313-14, and 320, which are worth looking after. The offer of the remaining numbers of this year *free* will be a special stimulus to new subscribers, and assist in making up premium clubs.

WAR MAPS.—All who wish a large, complete map of Virginia and the adjacent parts of Maryland and Pennsylvania, the present seat of the war in the East, will do well to avail themselves of the offers on page 320. Every person sending one or more new subscriptions, with his own, can have a map for each. The *Agriculturist* for November 1861 contained very complete maps of Kentucky, and Missouri, and a considerable portion of Tennessee. That number most of our readers have now. Those who have not can receive a post-paid copy for 10 cents. The map of the Southern States offered on page 320 will be very useful. The map of the United States is also a really fine one.

Those who have reported the Crops through the Summer, at no little trouble, and often at some considerable expense, deserve the highest thanks of all our readers, and of the country; they have ours most assuredly. These reports give more reliable information in regard to the crops of the country, than was ever before gathered at this early date in the season. —*One Request more.* In the reports for Sept. 10, we fear some did not note the change in the headings of columns **D—G—M—O,** where the number of *bushels per acre* was asked for. We shall be glad to hear at once on this topic. It will be interesting to know what is the average number of *bushels* per acre in different parts of the country. The duplicate blanks on hand might be filled up under these columns, where any mistake was made.

The Pumpkin and Gourd Exhibition, comes off next month. (See announcement elsewhere.) All who have large, extraordinary, or otherwise interesting specimens of Pumpkins, Squashes, Gourds, etc., are invited to exhibit them; but please give us early notice of what is coming, that we may provide room. Of course no one will leave us to pay expenses for the carriage of specimens—as the exhibition is free to all. A competent disinterested committee will award the premiums, and decide all questions of prizes according to the terms of the offer.

When to Sow Spring Wheat.—A Farmer in Iowa, says in connection with his crop reports that his experience tells him that if the importance of early sowing of Spring wheat could be impressed upon the public generally, the increase in the crop would be worth millions of dollars. The very earliest spring we take up is from N. Y. State, and on the same point says: "Early sown Spring wheat will hardly pay for harvesting, while late sown has mostly escaped, and is much better—some going over 25 bushels per acre."

Caution—Wheat.—Several subscribers at the West inform us that the "Mammoth Wheat," and the "Hallett's" Pedigree Wheat," distributed from the *American Agriculturist* office, is being extensively advertised for sale at high prices. We hardly see how this can be, as we only sent out small parcels to individuals, and Mr. Hallett informed us the present year that he had not had orders from America to any amount. There may be a little for sale, by responsible parties, but it will be well to look out for speculators. One of the parties advertising is not on our books, and could not have had the seed from our office.

Free Homesteads in Iowa.—We learn from Iowa papers ,that there are about 40,000 acres of Government lands in Humboldt County, 50,000 acres in the vicinity of Fort Dodge, and 4,000,000 acres near Sioux City, "as choice as any in the State." Those near Fort Dodge are "railroad" lands, being adjacent to the Dubuque and Sioux City railroad. All Government lands are open for free settlers under the Homestead Act.

What of the Steam Plow ?—On the 26th of June, the owners of the several steam-plows in England, brought out their implements in full force at Farningham, 24 miles southeast of London, and devoted three days to extended field trials under the auspices of the Royal Agricultural Society, then holding its great Show at Battersea Park, London. We spent some time at Farningham, carefully watching the operations on the different plows, with reference to the feasibility of their introduction into this country. The conclusion we came to was, that while these plows are adapted to some of the heavier lands of England, where human labor is cheap, but horse labor dear, they have too much rigging, and require too many attendants to allow of their general introduction into the Eastern and Middle States. A skillful man, with $6000 to $12000 capital, would most probably find it profitable to procure one or two of them, and make a business of plowing for others on the Western prairies. Some gentlemen of our acquaintance are sanguine that there is in this country a new steam plow, nearly finished, which will prove a complete success. It is to be thoroughly tested before being brought before the public.

Screw Stump-Blaster.—Not recollecting any other, we use this name for a simple but ingenious implement we saw in Dr. Rau's collection at Hohenheim Agr. College, Germany. In removing large stumps, and splitting tough, knotty logs, it would be more frequently desirable to use gunpowder, but for the difficulty of putting a firm tamping over the powder, and the trouble of using fuse or a priming rod. The apparatus referred to is simply an iron screw, with a deep thread, and a small hole lengthwise through its center. The same hole being bored in the wood, the powder is placed in the bottom and the screw, which is larger than the hole, is worked down upon it by means of a loose lever in its outer end. The center aperture is then filled with priming powder for firing. The thread holds even strongly rotten wood or brick tamping, and the same screw may be used for any number of logs or stumps. Any blacksmith might get up such a screw. There was one either at the International Exhibition, or at the Batterses Park Show, in London, but we believe this implement is not patented in this country.

Drains Stopped by Roots.—A Shaker Friend has left for exhibition at the office of the *American Agriculturist*, a remarkable specimen of root growth which we value at little damage. It is a portion of the roots of a maple tree, which stood in a meadow, near a stone drain. It is a compact mass of roots about two feet long and a foot wide, which had matted themselves about the stones of the drain and effectually prevented the passage of water, thus causing an overflow and greatly injuring several acres of grass. This occurrence suggests the necessity of removing trees from the line of drains, or in some way preventing their roots from thus causing obstruction. An important statement often insisted upon in these columns is also exemplified; viz., that, other conditions being favorable, an open porous soil is most conducive to growth. The roots speedily found their way among the interstices of the drains, and fattening upon the deposit from the water, developed into surprising growth. A tree with plenty of such fibrous roots, would have a corresponding vigor of trunk and branch.

Sale of Devons.—On September 10th, R. Lindsley Esq., of Meriden, Conn., held an auction sale of pure Devon cattle. E. H. Hyde, of Stafford, Conn., bought "Majestic" (imported), "Nelly Bly," "Nelly Bly 2d," and "Fanny 3d," (two years old); also yearling bull "Prince John 2nd." Hon. John Wentworth, of Chicago, bought "Fairy 2d" and calf, also two bull calves, one out of "Nelly Bly 2d," the other out of "Empress Eugene 2d." Levi Yale, of Meriden, Conn., purchased "Nelly Bly 5th." Mr. Buffum, of Newport, R. I., purchased a bull calf out of "Chance." Mr. L., intended to sell all his Devon stock, but so few buyers were present, further sales were postponed one month.

Curculios in Apples.—At a recent meeting of fruit growers, held at the *American Agriculturist* Rooms, Dr. Trimble, of Newark, N. J., exhibited curculios obtained by putting wormy apples which fell in June, into barrels of earth, and covering with millinet. The curculios hatched out in great numbers, and were retained by the covering. We have at our office a bottle of them alive and active; we feed them with pieces of pears which they appear to enjoy. This proves conclusively that when plums are scarce, as they were where these apples grew, the curculio will take to other fruit. Dr. T., who has made this insect a study for years, says they do not spend the winter in the ground, but in the rough bark of trees, or other hiding places.

Scalding Peaches to Peel Them.—W. Hunt, N. Y. City, informs the *Agriculturist*, that he has tried scalding peaches the same as tomatoes, to loosen the skin, and finds it an admirable plan for peaches that are *fully ripe*. Put them in a pan, pour boiling water over, and let them stand a minute, but not long enough to cook beyond skin deep. The skins will then cleave off readily without waste, as we have proved by trial.

Distance Apart of Apple Trees.—"Inquirer." You will find a discussion of this subject in the Nursery Catalogue of Messrs. Stephen Hoyt & Sons, of New Canaan, Conn., which is furnished free to all applicants, we suppose. They advise 18 feet apart when the orchard is the chief thing; and 36 to 40 feet, if crops be the principal object, and fruit a secondary one. Their reasons for this advice are plausible.

Standards and Dwarfs—The Difference.—D. Millikin, Butler Co., O. Standard trees are those which have undergone no change of *species*. They may be grafted or budded at pleasure, but retain the name of standard, though frequently dwarfed a little in habit. Proper dwarfs are those in which the species is changed by grafting or budding one sort upon a weaker or smaller growing stock of another species, as for example, the pear upon quince, apple upon paradise stock, etc. If you bud or graft the shag-bark walnut (called hickory nut,) upon the pig nut hickory, you neither make it a dwarf nor bring it early into bearing, as one variety is about as robust as the other.

Trimming Tomatoes.—A. A. Horton, of Fon du Lac Co., Wis., writes to the *Agriculturist* that, "trimming tomatoes not only improves their quality but hastens their maturity several days." This deponds upon the amount of cutting in. Without a fair supply of leaves no plant can mature its fruit well. The outer branches of tomatoes, and of vines generally, on which the green fruit can not mature before frost, may well be clipped off.

Striking Grape Cuttings.—E. W., of Hammonton, N. J., set 10 grape cuttings last season and lost but 6 of them. He follows out the direction of a German gardener, pruning the vines in Winter, and on the 10th of March he put the cuttings in a pail of mud and water for a week. They were then set in prepared trenches and started vigorously upon the approach of warm weather. The cuttings were put one half their length in the mud, and only a single eye was left above the surface.

Grapes from Seed.—N. S. Thornton, Randolph Co., Ind. Grapes from seed vary quite as much as apples. It is seldom that more than one out of a hundred seedlings is worth raising. The business is therefore best left to amateurs and professional growers, buying of them roots of such kinds as are wanted. A good kind obtained, can be increased by cuttings and layers.

The Camellia as a House Plant.—"Sophy." Your ill luck is not the first; the buds are very apt to wither and drop. To help you, here is a little advice. First, see to it that your soil is made up of turfy, spongy, fibrous soil from the woods. Have the pots well drained. Keep the plants in a cool room at first, say from 40° to 50°. When the buds are well developed, keep the soil wet; the saucers should never become entirely dry. When the buds begin to expand, bring the pots into the parlor or living-room, and give more heat. Sprinkle the foliage and keep the ground moist. In February and March, you may expect a fine show of blooms. Diminish the water as soon as the flowers begin to fade.

Removing Strawberry Leaves.—"O. W." The old spotted leaves seen on strawberry plants after the fruiting season, are those which have performed their office and will ere long decay. There is no need of removing them, as they will soon fall off of themselves, and they are useful as a mulch; the more of them on the ground the better.

Exterminating White Daisy.—"W. N. P., of Hyde Park, Vt., asks what to do with this pest "after it has got a start," and if the seeds can be killed in manure. It should not be allowed to "get a start" anywhere, as many farmers in western New-York, can regretfully testify. Constant cutting or pulling before a single plant blooms, in field, fence corner, or road, will in time worry it out, and this should be done—always done with this and other pests. Thorough composting and fermenting of manure will destroy the vitality of all seeds.

Book on Carpentry.—"C. L. L.," Clay Co., Ind. We know of no popular book on carpenter work adapted to general use. There are some expensive books on Architecture, suitable for professional master-builders, or those following the business. Native tact, and practice with common tools, will suffice for all ordinary operations; beyond these, as in the erection of buildings, it is cheaper to employ an experienced mechanic.

Stove Cement.—A very good cement for stopping cracks in stoves or pipes is said to be made by mixing iron filings white lead, and linseed oil together, to the consistence of putty. Apply to the joint or crack, and leave for a day or two before heating up the stove.

Cotton in Illinois.—According to estimates by sundry newspapers in Southern Illinois, the produce of cotton in the Southern counties will not fall below, but probably exceed 25,000 bales, or over 10,000,000 lbs. They further state that much more would have been planted could good seed have been obtained in season. These guess-work estimates may be far above or below the truth, but we doubt not there is enough growing to test the practicability of cotton culture north of the Ohio river. We solicit information from the readers of the *American Agriculturist* in that region.

Cotton-Growing Next Year.—James Coulter, Sen., Randolph Co., Ill., writes that he intends to plant seventy five acres in cotton next Spring. He is confident that it can be grown in that latitude successfully.

Tobacco in Wisconsin.—"H. W. A.," Milwaukee, Wis. We have seen a good growth of tobacco in southern Wisconsin. It will do well where Dent corn will. There are no books on Tobacco Culture in the Northern States.

"Holding the Reins."—"O. L. G.," a young reader of the *American Agriculturist*, at Buffalo, writes that while he was pleased with our illustrated article in May, on "Holding the Reins," he yet thinks he has a method superior to that. He writes as follows: "As I am no draughtsman, I will illustrate my ideas in this way: Take a pair of shears and open them wide, then grasp them with your hand around the crossed blades, and you will see my way of holding the reins. You have the reins crossed in the palm of the hand, and the fingers closed over them. Thus you have them held firmly, and you get a purchase which you can not have in most of the ways mentioned in that paper." His method is not altogether new, but we publish it to encourage him and others to think and practise on the various subjects presented.

Best Eyes in Potatoes.—J. B. W. writes that the eye nearest the stem of potatoes sends up a sickly shoot, and is unreliable. He has made extensive experiments this season. The center eye on the seed end grew the quickest, and produced the earliest potatoes.

The Fork Better than the Spade.—"Rustic." Not always. You could not make mortar with a forked spade. So in ditching, moving gravel, or sand, and in doing such like work, the time-honored spade and shovel will hold their old place. Yet, for some garden operations, the fork is preferable. In breaking up the soil of a garden in Spring, when the ground is a little over-moist, the fork will disintegrate it, when the spade would only make it a hard, compact mass. So in working among the roots of choice trees and bushes, the fork will do less injury to the tender roots, and at the same time be equally serviceable in loosening the soil.

Cook's Evaporator.—In our report of the Michigan State Sorgho Convention, we spoke of the first premium having been given to 'Cory's Evaporator.' It should have read "Cook's Evaporator with Cory's Improvement." The mistake occurred in the official report of the meeting. The improvement consists of a high ledge across the pan, with a gate for the more ready control of the stream when used without rockers upon a brick arch. Messrs. Blymyers, Bates & Day furnish their stationary pans with high ledges and gates, without extra charge. We learn further that all Mr. Cory's Evaporators are manufactured by them.

Clearing Ground of Hazel.—T. J. F. Healey, Whiteside Co., Ill. Your query seems to be answered by another correspondent thus: "Cut the Hazel in July or August, or even early in September, with a bush scythe; burn over if it can be safely done, and plow at once where the roots will admit. If it can not be plowed, sow with winter rye, and harrow in, plowing it another season, when many of the roots will be decayed.

Changing Seeds.—W. F. Troxell, Lehigh Co., Pa., recommends changing vegetable and other seeds every few years. His experience is, that they deteriorate if kept upon the same soil for three years, and that heavy or clay lands retain the seeds, or the vegetables they produce, in good condition, longer than light, loamy soils. He would never select seeds from a rich soil to be sown upon poor ground, but the contrary, when practicable.

Work for Children—Where Borers Work.—George A. Grataeap, Westchester Co., N. Y., writes: "My fruit garden of three acres is divided into three districts, and one child is appointed to each, with a reward allotted for each borer. Five or six times during the past two months, I have cut out, from one tree in one day, as many as ten young borers, most of them from 4 to 10 feet from the ground, and in or under the fork of branches. I have seen but two or three woodpeckers in these ten years. (More chance of course for the borers. Ed.) Within fifteen days after reading 'Remedy for Borers' in the July *Agriculturist*, I found one in a small uncovered root of about 1¼ inch in diameter."

Companies for Government Lands.—Jas. Lamport, Rush Co., Ind. We believe companies are forming in various localities, to take up Government lands, and form communities of acquaintances, but cannot point to an individual one just now. Such a company may perhaps be formed from your vicinity.

Large Tomatoes, Poultry-Manure.—We have received specimens of tomatoes weighing 1 lb. each, from J. Davidson, of Washington Heights, N.Y., who attributes his superior success in raising, to following the advice given in the July *Agriculturist*, viz.: watering the ground around, and manuring the plants with a solution of 1 shovelful of hen-droppings to 8 gallons of water. The same liquid manure proved equally efficacious on other plants.

Fruit in Wisconsin—Naming Varieties.—G. W. Hyer, Green Lake Co., writes to the *American Agriculturist*, that after much trouble in finding varieties of fruit that will stand the severe winters, cultivators in that neighborhood have at last secured a large and well selected stock. Grapes, particularly, promise finely this year. He says there is much difference of opinion in naming varieties of fruit grown there. If the sorts are of known kinds, Downing's Fruit Book, and other standard authorities will settle these questions. If new seedlings are to be named, they should be submitted to the judgment of experienced fruit-growers to decide upon their merits. Many specimens of natural fruit *ought* to remain nameless and unknown.

Scraping and Washing Trees.—"T. D., Syracuse." The reasons commonly given for this practice is, that trees with clean and smooth barks look well, and that insects lodge in rough barked and mossy trees. This is doubtless so; yet, is it not also true that nature gives the rough bark on purpose to shield the tree from the vicissitudes of climate? We would not advise severe scraping—nothing more than enough to dislodge vermin, and after this, let strong soap suds be applied. Follow this up with a little manure over the roots, and a moderate stirring of the soil.

Leaf Blight on Pear Trees.—Charles O. Newton, Cortland Co., N. Y. The leaves you sent are affected by what in this section of the country is called leaf-blight. It injures the leaves of seedling pears to so great an extent, that nurserymen in this vicinity are almost abandoned growing seedlings for stocks. They now import stocks mostly from Europe, or obtain them from parts of the country where they are not affected in this manner. The blight usually attacks the leaves in July, and always first those upon the last or previous season's growth. It does not kill the stock or tree at once, but gradually weakens it, and unless a favorable season should intervene, it will eventually destroy the tree. Ashes and bone are perhaps the best manures to apply to pear trees that are attacked by leaf blight.

Sour Rough, or Summer Pippin Apple.—J. C. Hart of Westchester Co., N. Y., sends fine specimens, and thinks this variety is not sufficiently disseminated, as he finds prominent fruit-growers do not know it, nor is it in many of the nursery catalogues. Downing describes it correctly in his last Fruit Book, and justly calls it a valuable fruit, ripening from the middle of August to the middle of September.

How the Sap Overcomes Obstructions.—Wrap a tape tightly around a thrifty clon, so as to impede the circulation, and the bark will grow from the top of the tape downward until it unites below. W.

How to Preserve Wood Mosses, etc.—Miss L. W., of Central Ohio, wishes the information. There is a great and varied beauty in the fragile forms of our many colored wood mosses, well worth preserving. Simply dried and preserved under glass, or where dust will not get upon them, and arranged in fanciful and tasteful figures, they are very pretty.

Transplanting Old Grape Vines.—W. Borgeaman, Leavenworth Co., Kansas. We advise early Fall planting of old vines in preference to leaving them until Spring. If the vines are quite large, better layer them, and when well rooted, plant the layers.

Aphis on Grape Vines.—S. French, Lorain Co., Ohio. The "plant lice" are sometimes troublesome by sucking the juices from the tender grape-vine shoots. Dipping the ends in a strong soap-suds, where it can be done, is a good remedy; otherwise syringe with a strong whale-oil soap solution.

Saving Strawberry, Raspberry and Blackberry Seeds.—W. C. Potts, Rice Co., Minn. Save strawberry, raspberry and blackberry seeds, by mashing the berries as soon as ripe, and washing out in water. Put the seeds in boxes of earth and keep moderately dry until Spring, then plant ½ inch deep in light soil.

Strawberries and Raspberries for a Family.—J. D. Henkle, Piatt Co., Ill. For family use, we advise planting the Triomphe de Gand strawberry, and Hooker, or Wilson's, if more than one is wanted. The Fastolf will suffice for a raspberry; Brinckle's Orange, and improved Black Cap may be added.

Large Blackberries.—Mr. C. Rivinius, of Morrisania, N. Y., has placed upon our table the largest and finest New-Rochelle blackberries we have seen this season. Three of them weighed a full ounce, and they were also juicy, *sweet*, and fine-flavored.

Prolific Currants.—F. Trowbridge, writing from New-Haven Co., Conn., says Deacon E. Newbury picked 19 quarts of cherry currants from 5 bushes, and challenges a better yield.

Two-Story Roses.—C. M. Morton, Mercer Co., N. J., sends to the office of the *American Agriculturist*, specimens of roses, from the center of each of which a stem rises bearing another perfect flower. In some cases a stem has risen from the second flower, and borne a third rose. This curious habit may become fixed in a variety, so that it will always produce flowers of the same character. Such instances are not common, although there are varieties of roses that often produce buds from the center of the first flowers, which afterward come into bloom. The Yellow Tea Rose, sometimes called *Smithii*, often produces flowers of this kind.

A Floral Question.—G. H. H., Madison, N. J. It is affirmed by some writers that the reason why we have no blue rose or blue dahlia, is because the rose and the dahlia, in their original wild state, had no blue or any combination or shade of blue in their flowers. And they say that the French florists may hybridize till they are blind, and yet not be able to get a color into a variety of plants which did not exist in the original species. We have made this statement before, on the authority of another, but can not vouch for its truth. It is, however, certain, that in the dahlia we have fine purples, and a very near approach to blue. So in the rose, *La Tourterelle*, for instance, popularly styled the "dove-colored rose," we have a slight shade of blue. In the hyacinth, as you observe, we have all the primary colors, with various shades and tints of the same. The question is a very interesting one, and is open for experiment.

Best Petunias of 1862.—"Jane." *Prestidium*, double, pale rose color. *Lizzie Reed*, single, striped white and crimson, of medium size. *Marguata*, single, deep crimson, tipped with white, large and very fine. *Captivation*, double white. *Zouave*, resembles *Marginata*, but smaller. *McClellan*, double crimson, tipped with white. *Countess of Ellesmere*, bright crimson, with white throat, very good.

Polygonatum *multiflorum*, or Solomon's Seal, appears to be the name of the wild flowers sent by C. Hoffman, Dauphin Co., Pa.

Sarracenia Purpurea for Small Pox.—This is our native "Pitcher Plant," and is said to be a remedy for small pox in all its forms, in twelve hours after the patient has taken the medicine; that, "however alarming and numerous the eruptions, or confluent and frightful they may be, the peculiar action of the medicine is such that very seldom is a scar left to tell the story of the disease." If either vaccine or variolous matter is washed with the infusion of the Sarracenia, it is deprived of its contagious properties. So mild is the medicine to the taste, that it may be largely mixed with tea and coffee, and given to consumers in these beverages to drink without being aware of their admixture. The medicine has been successfully tried in the hospitals of Nova Scotia, and its use will be continued.—So says the *Gardener's Monthly*.

Hibiscus.—The leaf sent by a subscriber in Marion Co., Ohio, is from the common shrubby Althea, the botanical name of which is *Hibiscus Syriacus*.

A "Quarter" of Grain.—In the English markets, grain is quoted by the "quarter," and the prices in shillings Sterling. The quarter contains 8 Imperial bushels, or 8¼ American bushels. (33 American or Winchester bushels equal 32 Imperial bushels). The English shilling equals about 24 cents and 2 mills. For a rough calculation we may reckon the Sterling shilling at ¼ dollar, and to reduce London rates to New-York bushel prices, divide the quoted shillings per quarter by 33. The telegraph reports a certain grade of wheat in London at 57*s.*—that is, 57 shillings, or $14.25 per 8¼ bushels. Or, dividing 57 by 33 gives about $1.73 per bushel. From this we deduct freight, waste, insurance, commissions, etc., to get the corresponding price in New York. When Flour is quoted by the barrel, we have only to divide by 4 to get the price in dollars, nearly. (Just now, four shillings sterling are equal to considerable over $1, owing to the price of gold, and the cost of exchange.)

Inches in a Bushel.—"New Subscriber," will find all he desires to know on page 136, Vol. 18, of the *Agriculturist* (May 1859). The American bushel contains 2150½ cubic inches (or exactly 2150.42). This is the old English Winchester bushel. The new English Imperial bushel has 2218 1-5th inches (or exactly 2218.192). A box one foot square, inside measure, requires to be very nearly 7½ inches high inside to hold ½ bushel, or about 15 inches high to hold a bushel (exactly 14.93 inches). A box 15 inches square and 9½ inches deep, holds very nearly a bushel. The exact depth is 9.55 inches. A box containing 56 cubic feet holds 45 bushels of grain. To get the bushel contents of a box: multiply its inside length, breadth, and hight together; multiply the product by 45 and divide this by 56. To get the size of a box holding any number of bushels, multiply the bushels by 56 and divide the product by 45, and you have the number of *feet* required. The hight will depend upon the length and width. *Example:* For 100 bushels, multiplying 100 by 56 and dividing by 45 gives about 124½ for the feet required. This is almost exactly 5 feet every way.

Nepaul Barley.—P. Adland, Racine Co., Wis. The barley sent is the above variety, figured and described on page 261, September No. of last volume. We distributed seed of it last Spring. See seed No. 190, with a brief description on page 4, January *Agriculturist.*

Hop Vines for Grain Binding.—The Maine Farmer suggests the idea of cutting hop-vines into suitable lengths, and storing them until next harvest, to be used for binding grain, corn stalks, etc.

Diseased Cattle.—George D. Sylvius, Susquehanna Co., Pa., writes that he has had several young cattle affected with a singular cough, which caused them to pine away, and one of them has died. On examination a large number of fine white thread worms were found in the windpipe and lungs. He would like a remedy.

Fatten Stock Early.—"J. W. B.," Madison. It is well to begin to fatten stock just as early as it can be uninterruptedly pushed forward. Irregular feeding is very bad. The feeding of grain or oil-cake should begin early, and with comparatively small quantities, and it should be gradually increased as the condition and appetites of the animal indicate. Quiet is an important element in successful management of fattening cattle.

Kicking Cows.—Take a hoop or strap of proper size, double the nigh fore leg, and slip it over the knee, past the pastern. She will stand and can not kick.

Weight of Cattle by Measurement.—J. L. T. will find no definite rule. Some cattle are long and tall, while others are short, thick, and deep. An animal girthing 8 feet ought to dress about 1,000 lbs.

Sick Hens.—I have seen chickens with a disease, the symptoms of which were similar to those described in the June *Agriculturist:* Fluid discharges from the nostrils, with a formation of something like a tumor, commencing in the corner of the eye, extending backward, and finally implicating the substance of the eye; blindness and death the result. I saved a few by repeatedly removing this formation, but tried no internal remedy: I disengaged it with a sharp instrument, and removed in sections: It would re-form, but yielded to persevering removal. J. B. W.

Keeping Vermin from Roosts.—A. J. Aldrich, of Mass., has adopted the following effective plan for protecting poultry roosts from vermin: A narrow groove, say three eighths of an inch wide, is cut in each roosting pole running the whole length. This groove is filled with oil or lard, which soon destroys lice on the roost. A small portion of it also will be rubbed upon the hens and thus expel the vermin. Snuff has been recommended for the grooves, but oil is much more effective.

Cleaning the Premises of Fleas.—J. McClure, of Logan Co., O., cleaned his barn from fleas, which an accumulation of rubbish had engendered, by scraping up and carting away all the manure, especially that under the barn, and yarding his sheep around and under the building at night, driving them away to pasture in the morning. He claims that the sheep transported the remaining fleas and left them in the field. Perhaps so.

Currant Bush Insects.—J. Townsend, Strafford Co., N. H. From the number of lady birds, (coccinella) found with the currant worms sent to us, we judge your bushes will eventually be freed from injurious insects. The lady birds, or turtle shaped bugs with yellowish wings, on which are six black spots, are our best friends, as they live chiefly upon other insects, and should never be destroyed.

Insects Multiplied by Fall-Plowing.—The Grant County Witness, Wis., says many farmers there begin to think that by Fall-plowing the eggs of the Hessian Fly and Chinch Bug are securely covered, instead of being left on the stubble to be destroyed by frost. On the contrary, we would inquire whether the eggs are less likely to be destroyed when dry, above ground, than when freezing and thawing in the moist soil? Burning the stubble would kill many insects. What says Dr. Fitch?

Driving Ants from Bee-Hives.—One who has tried it says that fine tobacco scattered about the hives will repel ants. It ought not to be put upon the bee stands, as the bees would be annoyed by so offensive a substance. *If* useful, place it around the supports of the stands, where the ants must climb to reach the hives.

Sulphur for Sheep Ticks.—E. R. Towle, Franklin Co., Vt., says a little sulphur mixed with salt, and occasionally fed to sheep, will certainly destroy ticks, as he has proved by repeated trials. He prefers the sulphur to oil sediment or tobacco extract.

Is Milkweed Poisonous to Bees?—D. Ryan, Armstrong Co., Ill., says he noticed dead and dying bees upon some milkweed, growing on his neighbor's premises, (*he* does not allow such weeds on his own grounds,) and upon examination, concluded that the sweets extracted from the flowers by the bees were poisonous to them. Has any one else similar observations?

A Word for the Blackbird.—F. M. Rogers, Stephenson Co., Ill., thinks the blackbird is unjustly slandered, and that the amount of insects he destroys more than counterbalances the corn he steals. There are two sides to this question.

When to Make Asparagus Beds.—W. Arnd, Cattaraugus Co., N. Y. Fall is the best time to make new beds, say any time in the month of October, especially from the middle to the last of the month. Choose 2-year-old plants if possible. Old matted roots are not as good, but may be used, however, and will yield cuttings sooner; fresh roots probably produce the best permanent bed; they are sold by nurserymen, commercial gardeners, and seedsmen, at $1 to $2 per 100.

Hops.—"G. B. S." Hops may be grown both from cuttings and from layers, and also from the seed.

To Keep Sweet Potatoes.—"R. B. S.," Jefferson City, Mo. When clean and dry, pack them in dry sand, and keep them dry and *moderately warm.*

Winter Covering of Tender Plants.—"Sarah." First, lay around and over the crowns of the plants a few dry leaves, or the rubbish from the garden, then put over them a shovelful or two of dirt. Putting on too much dirt is worse than none.

Transplanting Grape Cuttings.—W. S. Wooton, Howard Co., Ind. Cuttings put in last Spring, if well rooted, may properly be set in the vineyard or other permanent situation this fall. They are sometimes left for two years, but if set after the first season's growth there will be fewer roots to disturb. If purchasing plants, we prefer two year olds, to save time.

Pear Blight.—There are accounts of the prevalence of the black blight in the pear trees of New-England, Central and Eastern New-York, and other parts of the country. Cut, cut: cut: do not spare the knife. As soon as it shows itself, cut off the limb even if it be the best one on the tree. Prevent a recurrence by removing from the tree all manure and mulch after the first of September, if not before, and prune back the tender wood so as to have all the wood well matured. Should shoots of a second growth start, kill them off before Winter and mulch the ground about the trees, but not close to the stems, just before the ground freezes.

Keeping Dahlia Roots.—A Correspondent of the Cottage Gardener having lost many Dahlia roots by the rotting of the crown, discovered that the mischief was caused by the decay of the long stalk left attached to the tuber. The remedy is, to have not more than four inches of stalk; from this to scrape the whole outer covering of bark, and at the base to make a small opening which permits the watery deposit to escape. By this means he has succeeded in keeping the tubers sound.

Handsomely Done.—The Springfield News (Ohio), having copied our "Wheat Article" without credit, in another issue apologizes for the non-credit as an error of the compositor. and says: "We are sorry for the omission, and will try to prevent such an occurrence again, *but if our readers should find an unusually good article in our columns (the News,) without credit, it can be laid to the American Agriculturist.*"—Thank you: the account is more than square.

Coinage at the Philadelphia Mint during July.—During the month of July there were coined at the above mint 3,476 double-eagles, 20,960 quarter-eagles, 5,000 silver dollars, 52,800 quarter-dollars, and 3,600,000 cents, making a total of 3,682,236 coins.

Hohenheim Agricultural College.

One of the most interesting points visited during our recent journey abroad, was the Agricultural College at Hohenheim, six miles south of Stuttgart, the Capitol city of Wurtemburg, Germany. (Stuttgart is, by R. R., 125 miles S. E. from Frankfort.) We brought home some documents in German intending to write out a more extended account of this Institution, with the assistance of our associate Mr. Weld, who had previously made a more lengthy visit there. Owing to Mr. Weld's absence as a volunteer in the army, we delay the account for the time being, but will say in brief that this is one of the most complete schools of the kind in the world—the largest and best, we believe. The buildings are extensive, being the former Royal Palace, and the farm contains about 1000 acres. The cultivation of the farm is under the care of the Professors, and its proceeds, together with an additional allowance by the government, are devoted to the support of the school. Large plots are appropriated to important experiments with various crops, manures, etc. A manufactory turns out improved implements for the College farm, and also for introduction into the country. The best breeds of animals for the country are multiplied here in purity, and scattered among the land owners. The cabinets and museum are supplied with specimens of animals, including their skeletons; samples of implements of various countries, including all the plows in use in ancient and modern times, and in different nations; specimens of all the soils in the kingdom, in layers showing the upper and subsoils, and the rocks from which they were formed, also of artificial fertilizers; samples of various grains and grasses, weeds, of wools, etc., etc.: all varieties of horse-shoes, the bones of the feet, diseased limbs, etc. An artificial cow with the organs of parturition is used in the demonstrative lectures.—Some of the above we may perhaps describe more particularly hereafter, in separate notes. Students of all ages and degrees of advancement are received, and put into such courses of study as may suit their several ages, amount of previous knowledge, time of study, and especially their intended future occupations in life.—The cost for tuition, room, apparatus, and for all expenses, exclusive of board, is 300 Thalers a year (about $200). Board is obtained cheaply at restaurants in the buildings, in the European style, each article called for at every meal being paid for at moderate rates. We are under special obligations for the kind attention shown us by Professors Dr. Emil Wolfe and Dr. L. Rau, the former in charge of the chemical department, and the latter of the farm, implements, animals, museums, etc. Dr. Rau is the author of several treatises, and is enthusiastic in collecting the best animals and implements. His collection of plows, above referred to, is alone worth a long journey to examine. He has samples of our best American plows, and is aiming to improve upon them. American farmers or agricultural students going abroad will miss a great treat and much useful observation if they fail to make a long visit to Hohenheim. We regretted being hurried away so soon by the (false, London-vamped) unfavorable war news from home. Neither in Wurtemberg, nor in any other part of Germany we visited, is an American annoyed as he is in England, by hostility to or lack of sympathy with his own country.

Crop Reports for September, 1862.

Yield, Breadth, Condition, and Prospects of the Principal Crops in all the Northern States, for the Season of 1862. Reliable Reports from all Sections of the Country, Gathered Specially for the American Agriculturist.

Most important information is supplied on pages 314 and 315, of the *American Agriculturist* for October. The figures give in condensed form, the estimates of nearly a thousand careful, observing, practical, and reliable men, most of whom were selected to gather these reports from their peculiar fitness to aid in the enterprise, and their opinions and estimates are specially valuable. Each figure expresses a whole paragraph. The following summary will be useful to those who can not study the reports.

THE WEATHER (*Column A*).—The average for the whole country for a month ending Sept. 10th, is **9.8** (10 being the average for the same period during five years past). The average is lowered by drouths in some parts of Pennsylvania, Ohio, Illinois, etc., as indicated in the tables. In the northern tier of States, the weather reports are very favorable, averaging above 10.

WINTER WHEAT (*B*).—The gathered crop averages for the whole country 12½, that is, 25 per cent. above last year. As compared with the average of five years past, the figures (under *C*) are 13.9, or 39 per cent. higher. The best reports are from the great wheat States, Ohio, Indiana, Wisconsin, Michigan, etc. There can be no further doubt that, taking the whole country together, the aggregate yield of winter wheat this year exceeds that of *any* previous year.

SPRING WHEAT.—The gathered crop, in the counties reported from, averages 38 per cent. above last year, and 70 per cent. above the average for five years past. But from the limited number of reports from localities where this crop is most grown, and from the small yield in those localities, we judge that the *total* yield for the whole country is below that of last year.

INDIAN CORN.—The reports make the total area planted average about the same as last year, and 12 per cent. above the annual average for five years past. The prospective yield per acre on Sept. 10th, was a trifle below the average, taking the whole country together. In the great corn-growing State of Illinois, the good corn weather (except in a few counties where it has been too dry) has brought forward the crop so well as to promise nearly an average yield per acre. Owing to drouth, the reports from Ohio and Pennsylvania average poorly. If frosts hold off late, in the northwestern States where the growth is very fine, the total crop of the country will be fully equal to last year, taking into account the larger area. Early frosts would, of course, reduce the yield. On the whole, the prospect is good for a large corn crop.

RYE.—The reports indicate that the total yield this year is hardly up to an average.

OATS.—After a careful examination of all the reports received, and taking into account the area and yield where this crop is most grown, we conclude that the total product is just about an average. The aphis was very destructive in some localities, but not generally.

HAY CROP.—A few counties are reported to have a short supply, in southwestern New York for example; generally, there is an abundance.

POTATOES.—The reports indicate a general good crop. In parts of Ohio and Pennsylvania, potatoes have suffered severely from drouth. The "rot" is alluded to in a single instance only.

FRUIT.—Apples, Peaches, and Pears, and Plums wherever grown, are very abundant and very good. In a few counties in Ohio, they are reported deficient. For the whole country, many reports indicate that apples are nearly double the usual crop, and peaches nearly quadruple.

BARLEY has turned out very well in all places reported from, except in three counties.

FLAX, has been more widely cultivated than usual, and the prospects fully equal other years.

COTTON.—Several reports from southern Illinois and Indiana, speak very hopefully.

BEANS.—The demand for army food led to a large increase in the area planted, and numerous reports indicate a good yield.

CLOVER SEED, is largely grown in Bedford, Columbia, Franklin, and Montgomery Counties, Pennsylvania, and our reports from those Counties are very favorable. Little has been heard from other sections of the country.

HOPS and TOBACCO.—So far as reported, these were promising well in most localities.

SORGHUM.—Reports are very favorable from almost the entire West. The area is large, and growth of cane vigorous—better than usual.

The Foreign Demand for American Breadstuffs—Practical Hints.

Last Winter and Spring, the prospect was, that after the harvest of 1862, the large foreign demand for our breadstuffs would nearly cease. It was certainly to be expected that after two short harvests, and with the extraordinary breadth of winter wheat sown in good condition last Autumn, this year would witness an abundant supply in England and on the Continent. But the result is, (happily for *us*) quite otherwise. Every succeeding week's intelligence brings out this fact more clearly. As one certain indication, we may note that in London, wheat and flour are considerably higher than they were last year, and during the early summer of this year. It is now evident that, owing to continuous rains all through the early summer, the wheat straw in Great Britain made a poor sickly growth. On this point we are positive from our own observation. Such straw could not yield large heads of plump grain. The best authorities, and reports from hundreds of careful observers in different parts of the kingdom, admit a yield quite below the average. In France, and in Central Europe, the wheat crop is not above the average—rather below if anything. The condition of the wheat crop in Portugal, and probably in Spain, is sufficiently indicated by the fact that the Portuguese Government has taken the unusual course of throwing open the ports of that country to the *free* importation of breadstuffs. Official announcement of this was made to our Government through the Portuguese minister at Washington, a few days since. In short, the whole tenor of our recent advices from the other side of the Atlantic, is, that there will be a steady demand for all the breadstuffs we can spare from our crop of 1862.—From what we can gather, the breadth of wheat sown in our own country this Fall is not large, owing mainly to the scarcity of labor. It becomes us to consume corn largely, and save our wheat for market. It will be well, also, for farmers to plan for a large surface of Spring Wheat, wherever it can be grown with advantage. As much ground as possible should be broken up before the ground freezes. The action of frost upon new-plowed land is very useful, and the soil broken up now will be in condition for working earlier in Spring.

Exports of American Breadstuffs—Interesting and Important Statistics.

What is termed the "Grain Year" closed on the first day of September, after our last issue of the *American Agriculturist* had gone to press. In our Market Review, on page 316, will be found carefully prepared, condensed tables showing some statistics that will be of great interest, not to farmers alone, but to all classes. Probably few persons fully appreciate how much the facts indicated by these figures have had to do with the support of our country financially, during the past year of war. At the beginning of the war we were largely indebted to Europe for previous importations of merchandise, and for American securities held there; and we have since necessarily imported large amounts of war materials, guns, clothing, and other accoutrements for soldiers. Formerly our imports were mainly paid for by exporting cotton. When this was stopped, it might well be feared, and indeed it was expected by those in rebellion, that our country would be largely drained of gold and silver to pay up debts already incurred. But, as Providence ordered it, no sooner was the North in this financial danger, than relief was provided. Our fields yielded bountifully, while the European harvest partly failed.——Reducing flour to its wheat equivalent we have the following figures:

Exported from the United States to Europe.

Year ending.	*Wheat.*	*Corn.*
Sept. 1st, 1859	1,736,080 bushels	367,520 bushels
Sept. 1st, 1860	8,943,740 bushels	2,291,215 bushels
Sept. 1st, 1861	43,525,116 bushels	11,806,179 bushels
Sept. 1st, 1862	50,190,160 bushels	15,697,094 bushels

Or adding together Wheat and Corn, and comparing the present and past year, with the previous two years, we have these contrasts:

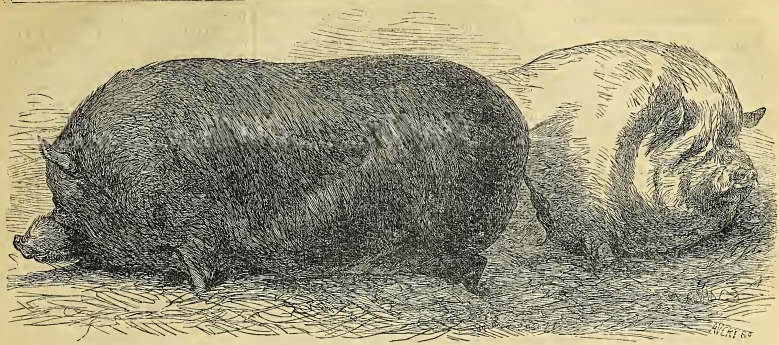
Wheat and Corn exported 1859–60.... 13,288,567 bushels
Wheat and Corn exported 1860–61.... 121,188,499 bushels

Thus, then, the exports of two kinds only of grain, have during two years past amounted to over *One Hundred and Twenty Millions* of bushels, worth at least, **150 million dollars**, all of which has gone where gold would otherwise have gone. (We have not referred above to exports to South America and the West Indies, which have been quite large comparatively.)

And not less remarkable is it, that this third grain year opens with prospects similar to the last two. The N. Y. City *sales* of Flour, Wheat and Corn, for the month (26 business days) ending September 19, stands thus:

	Flour, bbls.	*Wheat, bush.*	*Corn, bush*
1862	513,000	5,482,000	3,065,000
1861	514,000	5,279,000	4,270,000

The tables of exports for September of this year are not yet made up, but they correspond with the sales. The probability of the continuation of this large volume of trade in breadstuffs is discussed in another item.—Table 4, in the Market Review, shows that during 16 years past the *total* shipments to Great Britain and Ireland have differed but a fraction from 100 million bushels of Corn, 100 million bushels of Wheat, and 2½ million barrels of Flour (equal to a trifle over another 100 million bushels of wheat.) The other tables on page 316 are also interesting, showing, among other things, the volume of business in Breadstuffs at Chicago.



PRIZE SWINE AT THE ROYAL AGRICULTURAL SOCIETY'S EXHIBITION.

Engraved for the American Agriculturist.

Above we present excellent portraits of two of the prize hogs, shown at the recent Exhibition of the Royal Agricultural Society in London. The one in the foreground is the Berkshire boar "Lablache," the property of the late Sir Robert G. Throckmorton. All the good points of this excellent breed are well brought out. We see the small head and ear, the fine bone, compact carcass, and deep hams, which have so long made the Berkshires a favorite breed in England. In our country, of late years, the larger framed swine have attracted much attention. Their average weight may be greater than that of the Berkshires, but it may be doubted whether they will give a larger return of meat for the amount of food consumed. In this particular, the Berkshires stand very high. Specimens of great size have been raised. One is noted by Youatt, which measured seven feet seven inches from the tip of the snout to the root of the tail, and seven feet ten inches in girth round the center; five feet round the neck, and two feet across the widest part of the back. He stood three feet nine inches high; and what was most remarkable in this monstrous animal, he did not consume more than two bushels and three pecks of ground feed per week. Their ordinary weight, however, averages from 250 to 300 pounds. It is not always desirable that animals should attain such unwieldy proportions. For eating, the same amount of meat from two animals weighing 300 lbs. each, would be worth more than from a single one of double size, because the quality would be superior.

The second portrait in the above engraving is of the sow named "Silverwing," belonging to Mr. Wainman. She was the winner in the class of "sows of small white breed."

Making Game of Chickens.

It is generally known that the flavor of meat depends largely upon the kind of food on which the animal was fed before being killed. Fowls allowed to pick up their living from offal and filth yield flesh greatly inferior to that made from clean grain and other wholesome food. The spicy *game* flavor of partridges and other wild fowl is due to the aromatic nature of the berries and buds on which they subsist. As it is easy to regulate the food of domestic fowls, it is worth experimenting upon whether any desired flavor can not be given to the meat.

The Scottish Journal of Agriculture advances the opinion that this is possible. The chickens might not relish the food necessary to impart the flavor, but under the system of artificial feeding common in Europe this would be no hindrance. In France, fowls are fattened by pouring farinaceous food in a liquid state down their throats through a funnel made for the purpose, and it would be easy to impregnate the mixture with any oil or essence required. This would be necessary to be done for only a few days at the close of the fattening process, so that the health of the fowl need not be impaired.

To Keep Ice Cheaply.

A supply of ice to use through the heat of Summer contributes to profit as well as luxury, and a receptacle in which it may be kept is not necessarily expensive. The main essentials are: 1st, an outside shell, with from eight to twelve inches of clean sawdust, or other dry porous material; 2nd, protection from the direct rays of the sun; and 3d, a pipe through which to drain off or pump out any water that may collect at the bottom. Ice has been kept through the season in an enclosure made by notching long rails and laying them up like the outer walls of a log-house, in a position entirely protected from the sun. The ice was cut in large, solid blocks, packed closely, and water turned on to each layer and allowed to freeze solid. A space of ten or twelve inches between the ice and rails was filled with sawdust, and the whole was roofed with boards, with plenty of sawdust between the roof and ice. This was entirely above ground. Ice has also been kept in a similar structure one half underground. One who tried this four years failed at first because he used straw instead of sawdust for filling in around the ice. When he relied upon six inches of sawdust he had perfect success. The walls of his ice-house were made by setting common studding upright and boarding up each side of the studs, filling the space between with sawdust. Another has succeeded well by excavating —including the embankment made by the soil thrown out—about twelve feet in depth, then laying up a stone wall, dry to the top of the ground, and in mortar the remaining distance to the top of the embankment, covering the whole with a good roof. All that is necessary to success in keeping ice is fully stated in the first part of this article, and each can best judge for himself as to what particular style of structure will best suit his individual circumstances.

Experiments in Rotting Flax.

A Canadian gentleman, interested in flax-culture, writes from London under date of July 17, as follows, relative to experiments in rotting flax: "I wished particularly to ascertain the difference in value between dew-rotted flax and that steeped in the ordinary manner in cold water—and I was shown the result of a most interesting experiment on this very subject, tried this year. Flax taken from one field was separated into three portions—(1) one of these was dew-rotted, according to the custom of the country where it was grown (the grower thinking the quality not good enough for any other system)—(2) the second was rotted in stagnant water in pits according to the custom in the North of Ireland, and in many parts of Belgium—(3) and the third in running water, as practised in the river Lys at Courtrai. The last was the best flax when rotted, but the second was actually *double* the value of the dew-rotted flax.

"This circumstance should be known by our farmers, as the same crop may be made to yield a two-fold value according to the system of rotting practised; and in point of fact the steeping system—occupying only 6 or 8 days, is cheaper than dew-rotting, which occupies six weeks or two months, and must therefore require a greater amount of supervision."

By the way, we hope some process will soon be discovered for using flax for paper. The white paper on which the *American Agriculturist* is printed, contains a considerable amount of linen, in order to give it great strength for preservation in book form, without increasing the weight and postage. This makes the paper much more expensive than that for common newspapers that are to be used once and then thrown aside. Such paper can be manufactured of old cotton rags, with a considerable admixture of clay or plaster to give it thickness and weight without increasing the strength.

Plowing—Fall or Spring.

This question is discussed every year, yet remains more or less unsettled. We do not now expect to dispose of it effectually, but simply to suggest a few hints worthy of consideration.

No one can deny that fall-plowing saves time for doing other work in the busy season of Spring. Moreover, the soil is drier in Fall than in Spring, and so is in a better condition for working. He who has waited week after week for the spring rains to pass over and the ground to settle, will feel the force of this consideration. Again, if a piece of land is infested with grubs or other vermin, or with the roots of weeds, there is hardly a better way to subdue these pests than by throwing them up to the surface just before the winter frosts set in. Grasshoppers, the midge, and weevil, can not thrive much after turning their houses topsy-turvy in October and November. They can not rebuild in Winter, and many of them will be killed outright. For light, sandy soils, apt to blow about in open Winters, or those which are quite gravelly and porous, we question the expediency of fall-plowing. But for stiff clays, which need the action of frost to pulverize them, this is the best treatment that they can receive.

A friend in Wisconsin writes us, that in all his region the farmers do as much fall-plowing as they can, finishing up the balance in Spring. That then, they sow and harrow all together at the same time, and that in the Summer no one can see any difference between the growth and yield of the several fields; at harvest time, perhaps, the spring-plowed land is more mellow than the fall-plowed, but the grain is worse lodged. A correspondent of a western journal claims that for spring wheat and barley, fall-plowing is much preferable. He thinks that spring wheat grown on fall-plowed land, yields a better and surer crop than winter wheat sown in October. "The exposure to atmospheric influences during the Winter, mellows and enriches the seed-bed to such a degree, that whenever the grain is sown, it has the elements which it needs at hand ready for assimilation.....The soil newly turned up, has first to be prepared or mellowed, *oxidized*, as the chemists would call it, before it becomes fit to yield nourishment; and while this process is going on (in Spring,) much precious time is lost, and the growth of the plant is abbreviated in proportion, its time for tillering is cut short, and the yield can not be as large as when it has the whole length of the season which nature seems to have set apart as that in which the plant shall make stems and leaves, previous to the formation of the seed-vessels."

This certainly can be said in favor of the fall-plowing of sward land intended for corn. If it is done early in the Autumn, the sod becomes partially rotted before the time comes for planting, and so is sooner prepared to act as a fertilizer for the crop, than it would have been if plowed in the Spring. If ever the plant wants the food of the decayed sod, it is early in the season, to give it a quick and vigorous start.

Late planting is a frequent cause of the failure of crops. After they are got into the ground, a drouth often sets in which retards the germination of the seed. We plant late, because the cold rains put us back, and because of the pressure of other work. Now, if we should do much of our plowing in the Fall, we could take advantage of the first favorable weather to get our seeds in, and so gain considerable time in their growth. If we postpone all our plowing until Spring, we often do the work when the land is too wet: the consequence is that it becomes lumpy and stiff-baked—a condition unfavorable for the growth of any crop, and from which the land does not fully recover in a season or two.

Three Golden Rules for Cultivators.

They are golden because they will bring the gold. Read them: 1st, *Make manure;* 2d, *Save manure;* 3d, *Use manure.* If the first two can not be practised, which is hardly a supposable case, or if they do not give sufficient results, then follow the silver rule: '*Buy manure.*'

There are several sources upon which farmers may draw for a home-made guano, scarcely inferior to the imported, or manufactured fertilizer. They can get ammonia much cheaper in the home-made article, than to purchase it. The basis of the manufacture should be dry muck or peat; or if these can not be had, dry black loam from the surface of an old field or meadow. Put one or two cords of this under a shed, or in any dry place, and leach liquid manure through it. This may be slops from the chamber and kitchen, or from the stables and yard. The loam in the heap will absorb all the fertilizing matter in the liquid manure, and the water will pass off into the ground. It will of course grow richer the more liquid manure it receives. About a month before it is wanted for use, stop watering it, and turn it over with a shovel or fork, making it as fine as possible. If it be turned two or three times it will be all the better. A handful of this in the hill will promote the rapid growth of all garden and field crops.

With the same basis, ammonia may be furnished very cheaply, by mixing night soil with the muck. If in a wet state, it may be mixed load for load, and after lying two weeks be overhauled, and more night soil be added. If free from liquid the mixing in equal parts will make the compost sufficiently strong. Hard coal ashes are a very good absorbent, and may be substituted for a part of the muck. The excellence of this fertilizer will depend somewhat upon the thoroughness of the mingling of the particles. If this be overlooked, it may in some cases destroy the seed, though the danger will not be as great as in using unmixed guano or superphosphate in contact with the seed.

An excellent method of saving and using this article in an inoffensive manner is as follows: The vault of the privy should not be very deep. When once cleaned, throw into the bottom a layer (say a foot thick,) of dry peat, turf, or common soil. Have a heap of similar material nigh at hand, to be used frequently, both in Winter and Summer. This should be kept under cover, and should be so convenient that there will be no excuse for neglecting to use it. Throwing it in once a week in Winter, will do; but as often as every other day in Summer. This will absorb the liquids and keep down offensive odors. Every month or two the vault should be emptied; and where matters are managed as we have suggested, this will not be a very disagreeable job. When the contents have lain in a heap for six months, they may be worked over, and a third more of common soil mixed with them. This will then furnish a rich fertilizer for corn, wheat, grass, cabbages, and indeed for every crop or plant.

Another cheap source of ammonia is the manure of fowls, especially hens and turkeys. No farmer should suffer these deposits to run to waste. Being comparatively free from water, they will make four or five times their weight of loam or muck sufficiently strong for a concentrated fertilizer. The roost should be swept out once a week, and added to the heap. Or if neatness is not so much desired, the muck may be scattered under the poles, two or three inches deep, and stirred with a garden rake two or three times a week, and the whole be cleaned out once a month. This article is conveniently deposited in barrels. This simple fertilizer at the rate of a handful to a hill, will usually add twenty per cent. or more to the yield of corn, or potatoes, in meadow land of average quality. Dead animals are another cheap source of ammonia, requiring a little longer to decompose them, though if they are cut up, they are soon distributed through a pile of muck or loam. They should never be suffered to decay in the open air. By attending to these sources of manure, every farmer may make a concentrated fertilizer of great value. It will turn his leisure time in Winter into money, and add largely to his crops.

Uses of Gypsum.

Gypsum, (or Plaster of Paris), in the opinion of many, is regarded merely as a tonic or stimulant, and by others as a source of inorganic plant food. It is composed of sulphuric acid and lime, two substances which enter into the composition of *all* fertile soils, and into the ashes of all agricultural plants. That this is its great use in the soil can not be claimed, for it is notorious that in many soils which contain an abundance both of lime and of sulphuric acid, and perhaps we may even say, of gypsum itself, a fresh addition of the article produces marked good effects. By this then we are forced to the conclusion that the good effects are not always due to the gypsum simply, but often to those qualities which *fresh* gypsum possesses, and *stale* gypsum does not possess. Gypsum certainly attracts and fixes ammonia; it effects certain chemical decompositions in the soil; it is readily soluble in water, and thus a small quantity of it may be very thoroughly diffused through the soil; on this account a small quantity often produces a maximum effect, and this effect may also be, and it usually is, transient—not lasting more than one season.

It not seldom happens on sandy lands, that plaster operates finely for several years, and then ceases to produce any effect, unless it be to bring in sorrel and mosses. Why so? As yet science suggests no satisfactory reason. When this occurs, a dressing of lime often brings back the soil to a much better condition; but after this has been applied for one or two years, it needs following up with a good dressing of barn-yard manure. In this then, gypsum acts indirectly, and not as the food of plants. Nutriment must come from the manure heap, or green crops plowed under, or both. To rely on gypsum alone, is like giving a hungry man tonics, and withholding food; you stimulate him to death.

This much may be said in favor of plaster, that it generally increases the vegetable or leafy parts of the plants more than the grain, though not to the injury of the latter. By so doing, it increases the bulk of fodder, and thus of manure. If this product is carefully saved and wisely applied, the farm is sure to be improved, and all its productions augmented. Among the many theories respecting the action of plaster, Liebig's is certainly well established, viz: that it absorbs and fixes the ammonia of the atmosphere. And Sprengel's view

is apparently well founded, viz: that it furnishes sulphur to leguminous plants, in which case it acts as plant-food. It is certain that it benefits clover, (a leguminous plant,) more than it does cereal grains or grasses. But there are other facts connected with the action of plaster, which can not as yet be explained by science.

As a general rule, on low, alluvial lands, or those abounding in vegetable mould, gypsum is less effective than on dry, sandy, gravelly soils, or even clay lands lacking vegetable matter. On the latter, its effects are sometimes surprising, almost doubling the crops. Much is said about the best time for sowing gypsum. Whenever sown, it will not be lost; and if applied plentifully, it will last two or three years. But experience shows it to be specially advantageous if spread just before plowing. Sow it from the tail of a wagon, using from two to four bushels per acre, according to the state of the soil. A little observation, from year to year, will show when the land is plentifully supplied with plaster, or when it appears to lose its power of benefiting crops. Indeed, it is only by actual trial that we can certainly know that plaster will be useful on any particular soil.

Another and very important use of gypsum is as a deodorizer and fixer of ammonia in stables, privies, drains, composts, and like places. It prevents the waste of ammonia, and serves to purify many a place which would otherwise be foul and unwholesome. Whenever the manure-heap begins to ferment, let plaster go into it. Whenever a stench rises from stable-floor or barn-yard, let plaster be applied. And whenever that important building, (the compost heap,) goes up, let plaster go into the structure, at the rate of a tun of plaster to a hundred loads of crude manure. There is little danger that gypsum will not generally make good report of itself.

A Hint Touching Manure.

Why do we manure land at all? The majority of soils, as originally constituted, contain all the needful elements of vegetation. Go into a forest: see how the venerable trees shoot up grand and tall; how the vines and under-brush and plants grow in wanton luxuriance. Any need of the dung-cart here? Go out upon the Western prairies, or along the meadows and unexhausted river bottoms of the East. You can run your staff down many a foot through soil teeming with food for plants. Pray, what need again, of the odorous cart? No need, certainly, here or elsewhere, unless to bring back something which thieving man may have stolen.

Cut down an old orchard, and plant a new one on the same site: why do not the handsome little saplings thrive? Because the old orchard has exhausted the land of much of the food which orchards require. No wonder the young trees look so wretched; they are starved.

Crop a piece of wheat land, year after year, without returning in kind what is taken off, and the land will assuredly run out. But if the straw is spread on the land to rot, and if ammonia or other manures, equivalent to what the grain takes away, be restored to the land, it may and will continue productive for an indefinite period. The prairies have grown fertile by the annual decay of their own grasses. The forests grow rich by husbanding the products of the soil.

This, then, is my simple hint. If the land is poor, it must be brought up to a productive state, by manures adapted to its wants. If it is rich, we can maintain its fertility only by restoring to it in kind and measure as we take from it. This, as we understand it, is all "the philosophy and the mystery" of manure, except as it changes the mechanical condition of the soil. Let us never imagine that we can rob ourselves without loss.

Grazing as a Specialty—A Field for "Gentlemen Farmers."

The varied husbandry of the olden times, when markets were few and far between, is fast giving place, in the older States, to particular branches of farming. The division of labor which is carried out so completely upon the large estates of England, is beginning to be understood among us. The system has very great advantages and some evils to counterbalance. If we looked at pecuniary results alone, a single branch of farming can be made more profitable than a dozen different branches upon the same farm. It calls for less capital, and much less skill. On the other hand, a varied husbandry sharpens the faculties, and trains a more intelligent class of farmers. They form a practical acquaintance with a much larger class of objects, and are compelled by the daily necessities of business to a much wider range of thought.

The extent to which the old routine farming has been invaded by new ideas, is hardly suspected by farmers whose journeyings are confined to monthly trips to the nearest market town. In the vicinity of our cities and the railroads that lead to them, we have a large class of market farms, milk farms, and grazing farms. One raises vegetables for the city, another milk, another beef, another hay, and so on, relying upon some one article for all his income.

One of the safest and least troublesome of all these specialties, is the grazing of cattle for the New-York market as pursued in Putnam county, in this State, and the adjoining region in Connecticut. There are some peculiarities in the mode of grazing in this region, that we have never met with elsewhere. The cattle are not raised upon the farms where this method is followed. It is found upon experiment that hay fed to stock cattle during the Winter, will not bring more than five dollars a tun. Of course the *raising* of cattle can only be made profitable, in districts remote from large markets, where grass and hay are very cheap. The grazing farmer relies entirely upon purchased cattle for his stock. He buys in the Spring, about the time grass starts or a little earlier, western cattle, generally grade Short Horns, three or four years old, already in good condition, or second rate beef cattle. Sometimes stall-fed animals are purchased, when the market is over-stocked, and they can be got low enough. If the season is too early for grass, they are put upon the farm and fed with good hay until the grass starts, though this is an exception to the general practice. The cattle are divided into herds adapted to the size of the pastures and have no change until they are ripe for the butcher. It is found that a change even from good feed to better affects the cattle unfavorably, often scouring them and hindering their thrift. They are occasionally salted, and with this exception have no care from the owner. They are brought into the highest condition upon nothing but grass. Some of the best beef sold in our market is made in this way. The meat has a mottled appearance, little specks and streaks of fat, running through the whole mass of lean. Sales are made from the herds at any time during the latter part of the season when prices suit. The cattle are taken from the pastures early in October to give the grass a chance to make a thick mat to cover the ground during the Winter. We recently visited a farm where this system had been pursued for nearly twenty years. The results were satisfactory both in regard to the pocket of the owner, and to the improvement of the land. He has a thorough knowledge of cattle, and watches the market closely, and his profits are of course somewhat increased by his skill in making purchases and sales. He buys in Albany or New-York, as suits his interest, generally for 7 to 8 cents per lb., net weight, according to quality. He has a standing offer for his cattle of ten cents a pound, the butcher taking them when it suits his convenience. It is found that the bullocks gain, in a season of six months, from two to four hundred pounds, in rare cases five hundred. If a bullock weigh twelve hundred dressed, he gets an advance of say two cents a pound on the purchase price, equal to about nineteen dollars, and a gain in the weight of the animal of say two hundred and fifty pounds, worth twenty-five dollars. This would be an advance of forty-four dollars upon the largest sized bullocks. The farm has carried a hundred head of these cattle, and some of the best pastures feed a bullock to the acre, but allowing two acres to the bullock, it would give a net gain of twenty-two dollars to the acre, which must be considered pretty good farming for this country.

The first impression is, that such pastures could have been made only by abundant manuring and thorough tillage, and that they must run down under such cropping. But we were informed that the yield of these pastures is more than double the yield of thirty years ago, under the common system of manuring and cropping. We could well believe it, for where a large herd had been feeding all Summer, there was a thick mat of herdsgrass, red top, and white clover that would have yielded over a tun to the acre. We never saw finer pastures. The only manuring practised, beside the droppings of the cattle, is an annual dressing of plaster, about two bushels to the acre. This keeps the land constantly improving.

It will be seen that this system of grazing fat cattle has some advantages over that of grazing young cattle and cows, as it returns to the land nearly everything that it produces. In raising young animals, all the bones and carcass are raised out of the soil and sold off. The four year old bullock has his bones already made, and his flesh in good condition. He only draws upon the land for a little more bone earth, and the mineral constituents of two or three hundred pounds of beef. Whatever the philosophy of the fact, the result can not be doubted, viz., a constantly improving soil, under this system.

It makes a very easy and genteel kind of farming, giving a fair return for capital, and affording a good deal of leisure to the owner. The hard work of haying and tillage is avoided in Summer and the care of cattle in Winter. Very little labor also is required. No tillage is required except for crops consumed in the family.

The great draw back to it is, that it requires a much larger capital than most farmers have at command. The fatting cattle upon this farm did not cost less than six thousand dollars. Several thousand dollars must be handled every Spring and Fall in order to carry on a grazing farm to advantage. It presents an inviting field of labor for gentlemen of large capital, who enjoy country life, but who do not quite relish the hard work, close confinement, and careful attention usually demanded by a varied husbandry.

Preparing for the Sugar Crop.

Thousands of acres of Chinese Sugar Cane are now growing in Ohio, Illinois, Indiana, Iowa, Kansas, and even in California, to say nothing of the large tracts planted in many of the other States. As far as heard from, with very few exceptions, the cane is maturing well, often remarkably so, and ripening heads indicate that the season of manufacture is at hand. For several years people planted more as an experiment than for profit, and in many cases the cane was suffered to waste for want of suitable implements to grind and evaporate the juice. The low price of Southern and West India sweets was not favorable to the profitable growing of the northern cane, with the limited knowledge then possessed. The case is far different now. Sugars are high, and the results of the past few years' experiments have proven that not only syrup of good quality, but well grained sugar can be manufactured from the northern cane at a profit, even were prices much lower than at present. Much, very much is due to improved implements or mills for grinding, and especially for evaporators which will rapidly convert the juice into a thick syrup for granulating. Conspicuous among them, and apparently quite in advance of others, is Cook's Rocker Evaporator, with which many tuns of *sugar* were made last season, and hundreds of tuns will doubtless be turned out this Fall. The manufacturers say Ohio is good for 6,000,000 gallons of syrup, and they are turning out 100 evaporators per week.

But what we wish to urge now is that suitable provision be at once made for promptly working up the coming crop. Too much reliance should not be put upon neighborhood mills, and evaporators, convenient and economical as they are, for with the vast amount of cane to be disposed of, some will doubtless spoil before it is reached in rotation. Every person who expects to raise a few acres of cane each year, needs a good iron mill and a medium size evaporator, and he should not leave the procuring of them until wanted for use, as there will doubtless be a scarcity the present season, so great is the demand. A poorly made, light mill is little better than nothing—often worse. When the cane was first introduced, *hand mills* were to do the crushing, but with two strong men at the cranks it was found that but a small portion of the juice was extracted. Next wooden rollers and light iron mills were tried, only to break down in the midst of the work. A strong three roller mill, worked by at least two horses, is needed where much grinding is to be done, the feeding rollers being 4 inch apart, while the final pressure is given by rollers which run directly upon each other, the whole keyed up very strong.

If the cane can not be used up before heavy frosts, let it be cut and either stacked in the field, covering with straw, or packed away in a shed or barn to be worked up as soon as practicable. It is better to strip off the leaves before grinding, which may be done with the hand after cutting, or by striking them from the cane with a forked stick, while standing. Save the ripest heads for seed, and remove at least 2 feet of the upper end of the stalk as worthless.

The juice should be rapidly evaporated as soon as it is expressed, using some kind of a shallow pan so as to expose as much surface as possible both to the fire and air. Cook's Evaporator alluded to above is admirably calculated to effect this. To granulate, set the thick syrup in shallow vats or other vessels, in a moderately warm place, and stir occasionally. After it has grained put in barrels or hogsheads with holes in the lower end to drain off the molasses or syrup. Of course everything connected with the grinding and boiling should be done in a cleanly manner. Nothing is needed to clarify the syrup, if it is rapidly concentrated and the scum faithfully removed, nor will such syrup need going through the refining process of the sugar house to fit it for market.

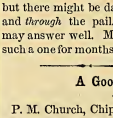
About Milking Stools—A New One.

Milking stools are dangerous articles in some barn-yards:—not in themselves, but as weapons in the hands of passionate men or boys, with which to belabor the frightened cows. This may have caused their banishment from many premises, as we have frequently seen milkers at their work on their bended knees or "sitting standing" as if doing penance for their want of patience. Instead, however, of dispensing with the bench, we would banish the milker who misused it by lifting it against the animal.

Some time since we received from J. E. Cutler, Essex Co., N. J., a drawing and description of what he claims as an improved milking stool. It is shown so plainly in the illustration that little description is needed. It is simply a bench long and wide enough for an opening in one end to hold the pail while milking, and afford a comfortable seat for the milker. The idea appears to be a good one, where the cows are all gentle, as they should be. But what if she give a sudden kick, as impulsive animals sometimes will? The pail could not well be overturned, but there might be danger of her stepping into and *through* the pail. With this exception it may answer well. Mr. Cutler says he has used such a one for months, and finds it just the thing.

A Good Bow-Pin.

P. M. Church, Chippewa Co., Mich., sends to the *American Agriculturist* a description of the simple and effective bow-pin, shown in the cut. It is made of half-inch round iron, with one end bent, to drop into a half inch hole in the top of the yoke, and the other made slightly tapering for easy insertion through the bow. The head of the pin resting in the yoke prevents all danger of its slipping from the bow.



Heading Late Cabbages.

It sometimes happens, either through the lateness of the season, or neglect in early planting, that cabbages do not head completely before cold weather sets in. These are often fed out to cattle, or thrown away, while by a little care they might be made to head during the Fall and early Winter. To accomplish this, proceed as follows: first, make a wide trench, and transplant the cabbages into it, setting them together in a triple row. At each end of the row, drive in a crotched stake, and lay a rail from one to the other, to form a ridge pole a foot or more above the cabbages. Make a roof of old boards or slabs, one end resting on the pole, and the other on the ground, so as to shed water. Over this, lay a little straw, six or more inches thick, and when Winter sets in, put on as many inches of earth, making the surface smooth and hard, so as to be nearly rain-proof. At each end of the row, leave a ventilating hole, which must be loosely filled with straw in cold weather. Cabbages so managed, will continue to grow, and will fill up their heads considerably before mid-winter. When taken out in Spring, they will be tender, crisp, and beautifully blanched.

Good Corn for Next Year.

Something may be done this month toward securing a good corn crop next year. First, as to the seed. It is established beyond doubt that the largest and best formed ears will be most likely to yield good successors. Before commencing to husk the crop, go through the field with a bag or basket, and pick the best, giving preference to the stalks yielding two or more good ears. If this be done before the whole crop is ripened, all the better, as the earliest can then be selected. By attending to this latter point a few years, the period of ripening for the whole crop, may be advanced several days, which in short seasons, might make a difference of many dollars in the net results.

Gather selected ears enough for your own use, and several bushels to sell to your less careful neighbors, who will next Spring be willing to pay an extra price for good seed corn.

Trace up the ears into bunches of convenient size, and hang them in a warm loft, secure from rats and mice, and where they may dry thoroughly before freezing weather. The vegetating power of corn is often destroyed by being frozen before the moisture is out of it. The water expands in freezing, and thus disorganizes the texture of the germ.

Then, as to the ground to be cultivated in corn next year: If it be heavy clay, or contain a large portion of that element, it will greatly aid next year's crop to plow it up this Fall, and leave it unharrowed. The lumps will be pulverized, insects will be destroyed, and if this be done early, the first crop of weeds and grass will spring up only to be cut down by the frost's keen scythe. We would advise spreading manure upon such lands before plowing. Being covered, it will not be wasted by washing away; the small part of its substance which may be dissolved, will be absorbed and held by the surrounding soil; mix it with the soil, and the speedy frosts will prevent loss by fermentation. Another important advantage gained will be the more thorough commingling of the manure with the soil, made by the cross-plowing next Spring. The more intimately this is done, the more certain will be the good effects of manure upon the growing crop.

In plowing undrained fields, arrange the lands with a view to carrying off surplus water. By a well planned series of dead furrows, the ground may be made ready for the Spring plowing several days earlier. Thorough underdraining is the best remedy for dropsical fields, but furrows are better than nothing.

How to Harvest Carrots.—Send a man with a sharp hoe through the rows, to cut off the tops. Then, beginning on one side of the patch with a plow, cut a deep furrow close to the first row of carrots; a second furrow will completely unearth them. Two boys with baskets will soon fill a wagon. When the crop is harvested, the land will be already fall-plowed.

Blinks from a Lantern....XXXI.

VISITS A WOMAN FARMER.

I never paid any particular attention to women when in the flesh. Perhaps that is a sufficient apology for my present interest in the "better half" of creation. My dwelling was rather too narrow for company, even if there were no more potent reasons for the cynic reputation that has survived me. To tell the plain truth, as a philosopher should, I always suspected it was the dweller, rather than the dwelling, that the women of my day objected to. It doubtless saved my feelings somewhat, to be told by this one, that my tub was too small for two; by that one, that my beard was too long; and by a third, that water would improve me. I took these not particularly complimentary hints, with the coolness of a philosopher, and remained wedded to my tub. I had occasion to observe, as I examined them by the light of my lantern, that the first had not even a tub at home, the second wore a wig, and the third wore more dirt than I did—with only this difference, that mine was a natural color, while hers was a tinge of red.

"A woman farmer!" exclaims a fair reader with lily hands. "The world has outgrown that idea." And possibly will have to grow back into it again. The only patent of a man's capacity for a given sphere of toil, is the fact that he fills it, and tried by this standard, as we have seen by the light of the lantern, there are not many men farmers.

"Just what do you mean by a farmer?" asks Mr. Higgings, with that solemn air which he puts on in his philosophic moods. Well, not necessarily a dirt-begrimed biped, with brawny arms, and a pair of palms like the hide of a rhinoceros. Such are to be found in large numbers upon the plantations of the South, clad in the coarsest material, and inured to the hardest work the year round, chopping wood, rolling logs, ditching, plowing, hoeing, and harvesting. Sex excuses no work. But it is not necessary that man, or woman, should do any of these things to make a first rate farmer. It is not necessary that a mason should mix his own mortar, or shoulder the hod. A man may be an architect without planing the boards, framing the timber, or driving the nails, or attending to any one of the details of building. A general need not fire cannon, or thrust with the sword and bayonet, and yet he may be well versed in the art of war. Strong limbs and tough muscles do not constitute a farmer. We have enough of these on most American farms, very good in their place, but no better than the brute sinews that drive the mowers and reapers, the rakes and drills, the cultivators, and hoes, that are doing so much to relieve human muscles, or dispensing with them altogether. The essential thing about farming lies in the *brain*, a region the blinks from my lantern fail to illumine, which perhaps accounts for my poor success in searching for a farmer. This brain I imagine is pretty much the same thing in man and woman. Philosophers of old were not agreed as to the question of sex in souls, and they are not yet harmonized. Whatever difference of opinion may exist upon this point, there can be very little as to the capacity of a woman to grasp the business details of a farm. It is no more difficult than many things which she does manage with aptness and entire success.

It is certainly as clever a thing to fit out a woman's wardrobe, especially if it be a fashionable one, as to stock a farm. She does this to a charm. She keeps a variety store, manages a bakery; sets type, binds books, writes and reads them, sings, paints, and makes herself immortal by the chisel. Why should not such a capable being *manage* a farm?

Mrs. Grundy has done it, and thus answered the question for her sex. She is a near neighbor of my friend Higgins, who has figured somewhat in these papers. Higgins poked fun at the idea of her farming, when she commenced, said he should as soon think of setting a woman to sail one of his ships. But he has experienced other emotions since, as she has frequently beaten him at the fairs, and last year got the prize for the premium farm in the county where Higgins was himself a competitor. To do my neighbor justice, he acquiesced in the correctness of the award.

She had some advantages which all women have not, but these were not such as take away from the substantial merit of her success. She was left a widow with six children at the age of thirty, upon a snug dairy farm, well stocked, but not more than half paid for. She might sell, she might lease the farm, or, manage it herself. She chose the latter, and people well acquainted with the parties say that she has managed with even more shrewdness and good sense than Mr. Grundy, who was a very fair farmer according to the popular estimate. She had to learn some things, of course. What sensible man does not, in every department of human effort, and still leaves many things unlearned. She is an excellent judge of horses and cattle, and would make a better decision at the shows than many put upon record. It would reform a woman-hater to hear her discuss the fine points of her favorite carriage horse, and the performances of her grade Devons and Ayrshires. It is womanly to paint horses and cows, why not to own them, and to manage them for pleasure and profit? If the inquiry is not hypercynical, is not a well dressed woman as attractive in a green meadow, admiring the liquid eyes of her grazing heifer, her sleek skin and swollen udders, as in a picture gallery, admiring the same things upon canvass? A woman's perceptions of form and color are, upon the average, as good as those of a man. Why should they not have their training upon wool on the sheep's back, as well as upon worsted work in the parlor? Mrs. Grundy was never able to discover why, and she knows a Saxony from a South-down, and is not ashamed of her knowledge. In the ornamenting of the homestead, she has greatly improved upon her husband's management. The bushes have disappeared from the fences, trees are planted by the road side, and by the carriage drive that leads to the house, which stands on an eminence a little back from the road. The dwelling and barn have the shelter of a belt of evergreens, which Mr. Grundy never thought of.

The result of her thirty years' farming, (for she is now an old lady), shows that she has understood accounts, and kept them. The farm has been paid for, greatly improved, and adorned; the children have been educated, and respectably settled in life, as the result of her enterprise. She has not held the plow, or driven, but has seen that work well done. She has understood men and women, and known how to use them wisely for her purposes. Mrs. Grundy is a woman of faculty, and for aught we can see, has as good a right to be a farmer as any man. With the example of this woman before him, the views of Higgins have undergone a change.

When to Sell Hay.

Most of our farms are in such need of manure that it is deemed bad husbandry to sell hay, and as a rule, it is only short sighted farmers that part with it at any price. If they can not pay for it in milk and beef sold, most farmers are certain it pays in making manure. With some it has passed into a proverb that "he that sells hay is a candidate for the poor-house." Unless something is restored to the land in the place of the hay, it is pretty certain to make a poor-house of the farm.

Here lies the whole secret of safety in selling this crop. The meadows must be kept in good heart, and if it is not done by hay consumed upon the farm it must be by some other process. Farmers living within a few hours of a good market and cheap sources of manure, can sell hay to advantage. The team that carries hay may bring back a load of manure. The farmer would really be at no expense for carting, for the cart would otherwise come home empty. If the manure were from a stable of grain-fed horses, the farm would be a gainer by the exchange. Cities and villages have many wastes that are cheap sources of fertility, and where these can be transported without much expense it will do to sell hay.

Then there are farms upon the sea-board and near sea ports, that may safely export hay. They have a cheap transit for their hay, and an inexhaustible source of manure in the fish and weeds which the sea produces. With a liberal use of these fertilizers a farm may be kept up to any degree of fertility. Farms without these advantages can rarely sell hay to a profit. The exceptions will be in the cases of farms liberally supplied with muck or peat, to form the base of composts, or those furnished with streams for irrigation. Muck, if decomposed with lime or ashes or fermented with any kind of animal manure, makes an excellent top-dressing for meadows, and with this, the soil may be made to yield maximum crops of hay.

It is asserted by men who have tried it for years, that meadows may be kept up to two or three tuns of hay to the acre by irrigation alone. In lands naturally or artificially underdrained, we have no doubt of the truth of this position. The productiveness of intervale land, where there is an annual overflow, confirms this position. Though artificial irrigation is little practiced in this country, the few examples that we have met with confirm the correctness of this position. We have little doubt that a brook, flowing through a farm of sufficient fall to be available for irrigation, is as valuable as a muck mine. The beauty of this mode of fertilizing is that after the dams are built, and the channels prepared, it costs nothing to keep the meadows fertile. You have only to look on and see the grass grow. We recently visited a farm cutting a hundred and fifty tuns of hay for this market, where water did the principal manuring. As the fields have gained in their annual yield for ten years, it may safely be inferred that they will yield grass abundantly as long as the water runs.

Shall we Cook Food for Animals?

Philosophically, the pro and con of this question seem about equally balanced; but practically, when done upon a large scale with the best conveniences, cooking food for fattening stock seems to have gained the ascendancy.

The philosophical arguments against feeding cooked food to animals are, in effect, that their digestive functions are naturally adapted to uncooked food, and that which is cooked anticipates some of the required processes of digestion, (passing into the stomach without sufficient insalivation and not inducing a sufficient influx of gastric juices, being among the evils) thus unbalancing the powers and deranging the functions of digestion. On the other hand, it is contended that cooked food requires less saliva and gastric juice, and hence saves an important draft upon the system. The results of experiments thus far seem to sustain the latter proposition. Of course it is not desirable to gain $20 worth of meat at the expense of $15 worth of labor and $5 worth of fuel, but if, in a larger field of operations, the proportionate cost of labor and fuel required for cooking be decreased, while the proportionate gain in value of meat remains the same, cooking will pay.

A correspondent of the London Gardeners' Chronicle, gives his experience and system as follows: "I have for 15 years fatted 20 to 24 bullocks, and 24 pigs, in boxes. My plan of feeding has been to give a morning feed, comprising about 30 lbs. of turnips sliced as thinly as possible, until I got pulping introduced, and then pulped, and very thoroughly mixed with chaff* as much as the animals would eat up clean. At mid-day the allowance of cake, commencing with 2 lbs. per head, and gradually increased up to 6 lbs. per head, has been made into a soup with water by steam, and poured, while boiling, over chaff in a slate cistern, layer by layer, until this was well mixed and filled; when full, it contains a feed for 24 bullocks. After this has been covered down an hour, the soup has been absorbed, and the chaff has become soft and mellow, and, as I believe, saves the animal the exertion of secreting an extra quantity of saliva to bring about the same result. The morning feed of pulped roots and chaff is repeated in the evening. I have adhered to this system because I have had every reason to be satisfied with the results. I have fattened upwards of 300 bullocks, and never lost one from first to last; they have enjoyed, I may almost say, invariable health, for veterinary attendance and medicine occasionally, would not amount to 6d. per head during the period I have mentioned. As respects quality, I perhaps need only say that the same butchers, from a distance, make their appearance at the farm buildings, about the same time every Spring, from whom I have never heard any complaint of meat shrinking either in the pot or on the spit.

The pigs have been fattened on carrots, steamed, with an addition of meal after the first month, gradually increased from 2 lbs. to 6 lbs. per head. The apparatus we use is Nicholson's (now Amies & Barford), consisting of a boiler in the center, a galvanized iron vessel on the left hand side in which the roots are steamed, and another on the right hand side in which the cake is converted into soup, and which is contiguous to the slate tank. Adverting to Mr. Frere's proposition in reference to extra cost of attendance and fuel, the case practically stands thus in our case: The attendance of one man and a boy would be necessary to prepare the roots, incorporate them with the chaff, feed, litter, and clean the stock of pigs and bullocks, whether the food was cooked or not. They perform the entire work, the chaff only being prepared for them. The cooking amounts to little more than lighting the fire in the steaming apparatus. Then as to the cost of fuel, we find the expenditure to average 5 lbs. of coal per diem, or from $12 to $15 per annum for 46 animals."

This writer also says that damaged straw and hay are rendered sweet and as valuable as any, by the boiling process necessary to the soup, and furthermore that the mustard seed so invariably found in rape-cake, rendering it highly objectionable, is deprived of its injurious qualities by the same heating process.

* "Chaff" in England means cut straw or hay.

Experiments in Feeding Stock.

The Highland Agricultural Society of Scotland, after trying a series of experiments with the view of ascertaining the cheapest cattle food, published the results in their Journal, as follows: Six bullocks, bred upon the Society's farm, and similar in appearance and aptness to fatten, were divided into three lots of two each. They were fed for 112 days upon Swedish turnips for the first month, turnips and mangel beets the second, and subsequently mangels. Each bullock had in addition, 6 lbs. low meadow hay, cut into chaff, and 5 lbs. oil cake, or its equivalent cost in other materials daily. The result showed that lot No. 1, fed on 5 lbs. oil cake each day per bullock, together with the chaff and roots, gained 637 lbs. during the 112 days. Lot No. 2, fed on the roots and chaff, with wheat and barley meal, costing same as the oil cake, gained 669 lbs. Lot No. 3, fed as above, substituting bruised linseed for the oil cake, gained 718 lbs., showing that the linseed was the most valuable, and the oil cake the least so. Again, the average increase in weight for the 112 days, was 337 lbs., and taking the cost of chaff, oil cake, and attendance, into consideration, it was found that the 90 cwt. of roots consumed, realized 49s. 6d., or 11s. ($2.75) per ton. This is quite different from Alderman Mechi's opinion of roots, in his crude book, "How to Farm Profitably," in which he says that the profits of twenty acres of roots all went into the manure heaps of the "ungrateful bullocks."

Keep to the Left!—Meeting Teams.

Can any body give a reason for the custom prevalent in this country, of requiring carriages and other vehicles to "keep to the right" when meeting each other on the highway? We noticed that in England, "keep to the left" is the rule, and a very proper custom it is, for this reason: The driver, if he carry and use a whip, must necessarily sit upon the right side of the vehicle, if any one sit with him. If now when passing another team, he keep to the *left*, he can readily see how much he must turn out to avoid clashing of wheels. The same is the case with the driver whom he meets. If on the contrary, they both take the "right" in meeting, they can neither of them see the wheels coming nearest together. They must therefore both turn out further than actually needed, or run the risk of clashing. A few inches, more or less, in a narrow road, or in a crowded city street, is often of much importance. A moment's thought will convince any one that "keeping to the left" is much the better way. In some States, there are laws requiring teams upon the road to take the right. In others custom regulates the matter. The reason we have given above is sufficiently important to warrant a change in the custom, and in the laws where they exist. The *American Agriculturist* proposes that the change be inaugurated without delay. It may seem odd, or left handed, but that is all a mere fancy, while many a clash and crash, and much inconvenience would be avoided by the proposed change.

Pulling at the Halter.

To cure this bad habit, some recommend hitching a rope to the horse's tail or hind leg, then to tie him to a post, in such a way that, when he pulls he will be thrown down, or at least be made very uncomfortable. A subscriber prefers this: "First, get an extra strong halter, and hitch him to an outer limb of an apple tree. Now, gently tease him, and provoke him to pull. The branch will yield, but still hold him fast. Tease him again and again, until he finds that he can not break his halter or effect any thing but his own discomfort. Repeat weekly until the lesson is thoroughly learned, and he will at length cease to pull when tied to a post."

Breaking Colts.

There has been great progress in this respect within a few years, owing mainly to a better understanding of the nature of the horse. It is now generally conceded that he can appreciate kindness and consideration, and that harsh and brutal treatment render him, (as well as children,) retaliatory, and disobedient when not under fear of the whip; and all colt-breakers should ever bear this in mind. The opposite extreme of laxness in discipline should also be guarded against. A person, to be capable of managing either a horse or a child, must be firm and persevering, but not harsh and revengeful. He must first conquer and control the animal part of his *own* nature, before he is capable of properly breaking a colt. Great patience and perseverance are required to quiet his natural fears, and satisfy him that you intend him no harm. All movements about him should be moderate and judicious. The hand should first be gradually brought in contact with his nose, as should every thing else new to him, because his nose is his instrument for testing whatever is harmless. What wonder that when suddenly seized or pounced upon, he exerts himself to get away? How can he know that the halter is not a contrivance to take his life? What need is there of giving him such a terrible fright, causing, as it often does, a trembling in every limb? Besides the inhumanity of such treatment, there is great danger that he will injure himself, or break away, and thus be encouraged in future attempts to free himself from restraint.

Anything that the horse can touch with his nose without being harmed, he does not fear. Therefore the hand, the halter, girth, blanket, saddle, harness, umbrella, buffalo robe, or whatever is to be brought in close proximity to him, should first be "introduced" to, and touched by that sensitive organ. A knowledge of these important facts, as we learned by attending a course of his lectures, is the main secret of Rarey's success in horse-taming. His strap method of throwing horses is useful only in cases of aggravated ill-temper, and such cases are usually, the result of mismanagement.

Cases are few in which colts may not be speedily and effectually broken by following the

directions, plainly implied by the above facts. Some colts, however, owing probably to some previous fright, will not readily allow persons to ride them. We have heard it recommended to make a man of straw, introduce it to the colt when haltered, gradually place it upon his back, fasten it *securely*, so that it can not be dismounted; afterward turn him loose and let him satisfy himself that it can not be got off, and that it will not hurt him. Thus the danger of any person being injured will be averted, and the colt will be effectually discouraged from making future attempts to throw his rider. Those who would have their colts long-lived, and serviceable in old age, should never work them hard when young. Allen truly remarks that "a due regard to humanity and sound judgment, in thus limiting the burden in his early years, would save much disease and suffering to the animal, and profit to the owner, by his unimpaired strength and prolonged life. The loss from neglecting this is enormous."

Harness for Oxen.

A subscriber agrees with us that "to make oxen draw by the neck is a refined sort of cruelty," but objects to our assertion that the true way for neat cattle to draw, is by the head. He says: "Although I admit that the 'power of the muscle is concentrated at the forehead,' (does not this settle the question? Ed.) still the strength of the neck and forehead do not warrant us in expecting so much of them. They were designed for other uses, not for us to contemplate now. The forehead has not breadth enough to allow it to be used satisfactorily. The draught would have a tendeucy, as the neck is so flexible, to draw the nose of the animal upward. If, however, the animal knows enough to obviate this difficulty by throwing his head downward, this would be an unpleasant position to work in. He has at all times to keep his head so that the line of draught will be at that angle where ox and weight are upon a level; it is this tendency in a yoke (of getting the neck and head down), that help to make the beasts pant and blow on a hot day, at the rate they do.

If you now place a leather collar upon his shoulders, and let it fit nicely, you will at once see an improvement. He will carry his head up to a corresponding hight, where he can get plenty of fresh air, and prevent it interfering with his legs. His head is free to balance himself, and swing to the motion of his body. With this collar you would, of course, need traces and breeching for road work."

No doubt a properly made collar and harness would be a great improvement over the yoke now used. Experience, after all, must decide the point. Have any of our readers thoroughly tested the three methods?

For the American Agriculturist.

Making Pigs Pay their Board.

My plan is as follows: Immediately under the edge of the floor, which is tight, I have a pit five feet deep, and extending in width and length 14x20 feet, into which is cast all the soiled bedding, refused food, and sweepings of the pen. As soon as this material forms a stratum of a few inches, I have it covered with soil or muck to the depth of six inches. This will soon become saturated, and I then repeat the dose. Into this I also throw all the coal ashes, old shoes, dead rats, offal of beeves, chamber slops, etc. A little care of this kind removes nuisance, and muck or soil secures the ammonia. From a pen in which were fattened nine nice porkers, I secured 73 well-rounded cart loads of manure. I think the manure amply paid me for the trouble, besides the satisfaction of having my hogs clean and fat. FARMER.

J. C. Taylor's Sale and Letting of South-Down Sheep.

This noteworthy event of the past month occurred at Holmdel, N. J., on Sept. 3. There was a large gatheriug of persons, including not only new breeders and purchasers, but those who, like Messrs. Thorne, L. G. Morris, A. B. Allen, and others, have loug been interested in introducing improved sheep into our country. We are are happy to report that notwithstanding the hight of the war excitement, and the general depression of the times, the sale was very satisfactory. The prices obtained were not up to those usually paid in England for the sheep of the same blood and intrinsic value, nor such as would probably prevail here in times of peace, and with a more general knowledge of the value of this breed of sheep. Still, as a glance at the figures appended will show, Mr. Taylor and others have not been on a "wild goose chase" when they have gone to the old world and at large expense procured the best blood that could be found. It will be seen, for example, that half a dozen ewe lambs, dropped this year, averaged nearly $35 each, and that of twenty such lambs, even the smallest brought $14, while others went at $20 to $41 apiece. After the first outlay in obtaining the pure blood, it costs less per head to grow these lambs than those worth only $3 or $3 each. Those prices were paid by intelligent men, looking to the profitable investment of their money. It is true that the prices were governed by the demand for breeding, but butchers would have readily paid twice as much for the same animals as they would have done for the common sheep and lambs of the same age. Any farmer accessible to a good meat market, and having 50 or more breeding ewes of any kind, can readily afford to pay $30 to $50 or more for the use of a South-Down ram. The increased value of his half-blood lambs would more than repay the cost. As soon as our markets get a little familiar with such South-Down mutton as we had the pleasure of eating daily while in England the past Summer, we are sure that there will be an almost unlimited demand for such sheep.

Of the value of the South-Downs, and of Mr. Taylor's flock, our associate wrote particularly, in the *American Agriculturist* for August (p. 233). We were glad to find at the sale, men from different parts of the country. The list of purchasers below will show that the forty nine sheep disposed of are pretty widely scattered—12 have gone to Pennsylvania; 11 to New-York; 9 to Illinois; 8 to Ohio; 5 to New-Jersey; 2 to Canada East; 1 to Connecticut; 1 to Massachusetts. They will each be centers of distribution.

The "Letting" or renting of rams for a season's use, to the highest bidder, though much practised abroad, is almost a new feature here, but will doubtless grow into general favor. The skillful professional breeder can keep on hand and best care for the pure bloods, and let them out for a month or two, to those who desire grade lambs, but who do not wish to go to the expense or trouble of keeping a single pure blood throughout the year. If we remember rightly, Jonas Webb, when in the business, let out about 70 rams annually, at prices ranging from $35 to $200 per annum, the average being between $100 and $125. (In one case he obtained 197 guineas, or fully $1000 for the use of a ram a single season). At Mr. Taylor's auction, the preference appeared to be to purchase, and at first only very moderate bids were made for the use of those rams which Mr. Taylor could spare temporarily, but which he did not, on account of their value, wish to sell at any price. Two were rented at $80 and $100, however.

RAMS RENTED FOR THE SEASON.

TWO-YEAR OLDS.

No. 106, "Webb's Favorite Yearling," imported in '61; To Hon. A. B. Conger, Haverstraw, Rock'd Co., N. Y. $52.50
No. 14, "Young Prize,"—sire, "World's Prize,"—dam, No. 71, imported in 1859, from Mr. W. Webb's Dishley Flock; To Harry Ingersoll, U. S. N., Philadelphia.. $25.00

SHEARLINGS (*One-year olds.*)

No. 24, "Young Partcranger"—sire, "Reserve,"—dam, No. 71, as above; To Peter Lorillard, Esq., N. Y. $100.00
No. 21, "Young Norwich,"—sire, "Reserve,"—dam, No. 4, imported in 1859; To A. C. Sissons, Esq., Waverly, Luzerne Co., Penn.. $80.00

SALES.

RAMS—SHEARLINGS (*Or one-year olds.*)

No. 1, Sire, "Vigor,"—dam by "Young York"; To Lawrence Hasbrouck, Esq., Kingston, Ulster Co., N. Y. $45.00
No. 5, sire, "Young Prize," dam by "Young York"; To Lawrence Hasbrouck, Esq.. $45.00
No. 8, sire, "Young Prize,"—dam, imported in 1859; To Geo. Batchelder, Esq., Stanstead, Canada East.. $52 50
No. 10, sire, "Reserve,"—dam by "Young York"; To T. B. Davis, Esq., Westchester, Chester Co., Penn.. $42.50
No. 12, sire, "Reserve,"—dam by "World's Prize"; To Hon. A. B. Conger, Haverstraw, N. Y. $47.50
No. 13, sire, "Reserve."—dam by No. 14, imported in 1859; To Judge N. L. Chaffee, Jefferson, Ohio.. $80.00
No. 15, sire, "Reserve,"—dam by No. 29, imported in 1859; To Wm. Black, Esq., West La Fayette, Ohio.. $50.00
No. 17, sire, Twin to No. 15; To J. T. Thorne, Esq., Chester Co., Penn. $35.00
No. 23, sire, "Reserve,"—dam by "World's Prize"; To Henry Pyle, Esq., E. Fairfield, Columbiana Co., O.. $40.00
No. 25, sire, "Reserve,"—dam by "Master Fordham"; To Lewis Hoops, Esq., Westchester, Penn.. $52.00
No. 26, sire, "Reserve,"—dam "Model Ewe," by Frank Forrest—dam, by Young York—g. g. dam, No. 6 at Col. Morris' sale; To Phineas E. Close, Esq., Greenwich, Fairfield Co., Conn.—(cheapest sale of day).. $61 00
Average. $51.86

EWES—THREE YEARS OLD.

No. 27, sire, "World's Prize,"—dam imported by Col. Morris; To Harry Ingersoll, Philadelphia.. $40.00

EWES—TWO YEARS OLD.

No. 9, (sire and dam same as No. 27); To Judge Chaffee, Jefferson, Ashtabula Co., Ohio.. $87.50
No. 33, sire, "World's Prize,"—dam imported in 1859; To A. C. Sissons, Esq., Luzerne Co., Penn.. $32 50
No. 39, sire, "World's Prize,"—dam by "Young York"; To A. C. Sissons, Esq., Luzerne Co., Penn.. $42.50
No. 42, (sire and dam same as No. 39); To Judge Chaffee, Jefferson, Ashtabula Co., Ohio.. $35.00
Average. $46.87

EWES—ONE YEAR OLD.

No. 44, sire, "Vigor,"—dam by "Young York"; To A. C. Sissons, Esq., Luzerne Co., Penn. $32.00
No. 45, sire, "Vigor,"—dam by "Frank"; To A. C. Sissons, Esq. $40.00
No. 46, sire, "Young Prize,"—dam same as No. 27; To Judge Chaffee, Ohio. $65 00
No. 48, sire, "Reserve,"—dam by "Young York"; To J. T. Thomas, Esq., Chester Co., Penn. $87.50
No. 51, sire, "Reserve,"—dam imported in 1860; To Geo. Bashter, Canada East. $87.50
No. 55, sire, "Reserve,"—dam by "Frank"; To Harry Ingersoll, U. S. N., Philadelphia. $40.00
Average. $42.00

RAMS—LAMBS, (*5 to 6 months old.*)

No. 3, sired by No. 89, (the famous $1,200 ram bought at Mr. Webb's sale, 1861)—dam No. 3, by "World's Prize"; To Alonzo Norris, Esq., Spencer, N. Y.... $30.00
No. 21, sired by No. 89—dam (10) imported in 1860; To Sanford Howard, Esq., Boston, Mass. $25.00
Average. $27.50

EWE LAMBS, (*5 to 6 months old.*)

No. 66, sire, "Reserve,"—dam by "World's Prize"; To Hon. John Wentworth, Chicago, Ill. $30.00
No. 68, sire, "Webb's Favorite,"—dam by "World's Prize"; To Hon. A. B. Conger, N. Y. $35.00
No. 72, sire, "Webb's Favorite,"—dam bought at Col. Morris' sale; To Wm. Black, Esq., Ohio. $31.00
No. 75, sire, No. 89, as above,—dam by "World's Prize"; To Hon. A. B. Conger, N. Y. $41.00
No. 76, (sire and dam same as No. 75); To Hon. A. B. Conger, N. Y. $37.00
No. 81, sire, "Webb's Favorite,"—dam by "Frank"; To Wm. Black, Esq., Ohio. $32.00
Average. $34.83

RAM LAMBS (*5 to 6 months old, sired by No. 89—dams pure bred, of different pedigrees.*

No. 1, To Hon. A. B. Conger, Haverstraw, N. Y. $15 00
No. 4, To Hon. John Wentworth, Chicago, Ill. $27.00
No. 5, To J. J. Conover, Allentown, Monmouth Co., N. J. $27.00
No. 6, To Alonzo Norris, Esq., Spencer, Tioga Co., N. Y. $21.00
No. 7, To Rev. Garrett Schenck, Marlborough, N. J. $14.00
No. 9, To John S. Conover, Esq., Holmdel, N. J. $16.50
No. 10, To J. J. Conover, Esq., Allentown, N. J. $14.00
No. 11, To Isaac K. Demott, Esq., Clinton, N. J. $18.00
Average. $16.58.

8 EWE LAMBS, (Nos. 1, 2, 3, 4, 5, 6, 7, 8.)

(*Pedigrees same as the above.*)

All to Hon. John Wentworth, Chicago, Ill.: $26—$16—$16—$24—$21—$21—$21—$22 (averaging $20.87).... $167.00

Total of Sales and Lettings..... $1,584.50

[The above figures we prepared on the ground, and afterwards compared them with the auctioneer's books

THE FUCHSIA—*Engraved for the American Agriculturist.*

The increasing demand for house-plants that grow well without scientific care, and bloom profusely for a long period, has brought the Fuchsia, (often styled "Ladies' Ear-Drop,") into high favor. Among its several varieties are those which flower both in Winter and Summer. Chili, and the region of the Andes, have the honor of originating this class of plants. The first wild flower discovered was scarlet, but by patient hybridization, upward of one hundred varieties of other colors and shades and form, have been produced. The aim of the hybridizer is to reach a certain standard of excellence, which consists in having the sepals reflexed back to the stem or tube of the flower, and the corolla well expanded. In respect to colors, tastes differ. Some prefer white sepals and crimson or rose corollas; others, purple corollas and crimson sepals; others, white corollas and crimson sepals. Some have a special fancy for single flowers, others for double. The field of selection is large enough to suit every taste.

The number of *Winter-blooming* Fuchsias is not large. Perhaps the very best for this purpose, is the well-known *Speciosa*, with its rosy white sepals and crimson corolla. After this, may be named, *Hero*, *Serratifolia*, *Diademe de Flore*, *Snow-Drop*, and *Prince of Orange*.—To have them bloom well, pot them in large crocks, having good drainage, and filled with a porous soil composed of sand, leaf-mold, old rotted manure, and common earth, in equal quantities. For the best effect, they should be trained to a single stem two or three feet high, with the branches hanging from the upper part in graceful pendants. Keep the temperature between 60° and 70° by day, and not below 40° by night, supplying the roots with an abundance of water; keep the air of the room as moist as may be, and there will be no lack of blossoms. On the opening of Spring, set them out in some retired corner to rest, and to become vigorous for another Winter's work. About the first of September, re-pot them in soil such as we have before mentioned, cutting them back somewhat severely; keep them a week or two in the shade, and well watered until they have become re-established; then bring them into the house.

Summer blooming varieties are to be treated in a similar way, as to soil, pruning, etc. In Winter, keep them under the stage of a green-house, or in a dry cellar. It is a great mistake, not seldom practised, to set out the plants in Summer, in a sunny situation. To preserve the foliage fresh, and to maintain an abundant and long-continued bloom, they require a partially shaded aspect, such as the north side of a house, or a sheltered piazza, or the stage of a green-house, taking care to have the glass well covered with whiting, or darkened by awnings.

As to the best varieties, tastes will differ; but the following are undeniably good sorts: Prince Albert, Wonderful, Duchess of Lancaster, Florence Nightingale, Spectabilis, (this is styled by Dr. Lindley, "the Queen of Fuchsias,") Psyche, Princess Royal, Emperor Napoleon.

An amateur hands us the following: "For twelve first rate Fuchsias, take these: Ariel, Clio, King, Prince Arthur, having light colors with purple or red corollas; Alpha, Glory, Hendersonii, Omega, Perfection, President, Prince Albert—scarlet colors, with crimson, purple, or blue corollas; Queen Victoria, red, with white center or corolla. Give me these dozen varieties in my garden, and I care for none beside."

Propagating Grape Vines.

At this season of the year, many thoughts are directed to this subject, and many inquiries made of those who are supposed to understand it. A special interest has of late been awakened in it because of the superior excellence of the newer varieties, and of their profitableness for market. We will now describe several different methods, leaving the reader to choose between them.

LAYERING.

This is the surest, and in some respects the best. The common way is to bend down, early in the season, a cane of last year's growth, dig out a trench three inches deep, and as long as the cane, peg down the shoot by short pins, and cover it with earth. Spread a few leaves, or short grass, over the surface, to keep the ground moist. Roots will form all along the cane, and from the strongest buds shoots will spring up. In Autumn, the cane may be severed from the parent vine, and may be cut into as many parts as there are shoots with roots.

When it is desired to get as many new vines as possible, a *better* way is to let the cane lie on the top of the ground until early Summer, until shoots have pushed six or eight inches from every eye, then peg it down in a shallow trench, and cover it with soil. Roots will soon strike out at the base of every young shoot, and we shall be quite sure to get as many new vines as we have eyes. If the vine is old, and has been trained so high that canes cannot easily be layered, resort may be had to the following process. Take a large flower pot, draw a side grape shoot up through the hole at the bottom, fill the pot with sandy loam, and hang it to a stiff branch above, or to a hook on the frame. The cane should have the bark scarred near the base of a bud in the lower part of the pot. This will favor the emission of roots. Keep the ground moist by frequent waterings, and a new plant will soon be formed. Cut off the cane below the pot, in Autumn, and the work is done.

CUTTINGS.

These are of two sorts, the long cutting for planting in the open ground, and the short, for starting in hot-beds. The long cutting should contain two or three buds, the wood should be ripe and strong, and the buds plump. Taken off at the fall or winter pruning, they are easily preserved in a bank of earth out of doors, or in a cool part of the cellar. Each cutting should have a bud close to the base, and if there is a piece of the old, or last year's wood attached, it will be more sure to strike well.

In planting, choose soil of a sandy loam, not a stiff clay, and not wet. If it is very sandy, the cuttings will be apt to dry up in mid-summer. If the land is cold and stiff, work in a little sand, especially in the part occupied by the base of the cuttings.

Suppose we have a hundred or more cuttings: we will begin the work by spading up the ground, and putting it in the best condition. Level it down handsomely, draw a garden line across the patch on one side, and cut out a trench one foot deep. Set the cuttings in obliquely; if set perpendicular, the lower buds, being so far from the heat and air of the surface, will rot off without forming roots. The lower bud should not be deeper in the soil than six or eight inches. The upper bud should be just on the surface; if higher up in the air, the cane is apt to dry up. The cuttings being in place, fill up the trench and level off smooth. Proceed in the same way with other rows, until the cuttings are all planted, leaving a space of eighteen inches or two feet between the rows for convenient cultivation through the Summer. If the season is very dry, mulch between the rows.

SINGLE-EYE CUTTINGS.

These are employed chiefly in the propagation of choice varieties, where the vineyardist can not afford to use so much wood as is required in the long cutting, and where it is wished to make a little wood go a great way. These cuttings, or more properly buds, are prepared by taking a single one, with an inch of wood on each side of it, and splitting off nearly half of the wood underneath the bud. This last operation facilitates the striking. The buds are then set out in a gentle hot-bed, about half an inch deep, or in pots or boxes plunged in a hot-bed. The latter method is generally most successful. They should then be regularly watered and ventilated until the young vines are hardened off enough to be removed to the open air. Experienced propagators prefer this method to any other. It not only saves a great deal of wood, but, as each new plant retains only a trifle of the substance of the parent vine, it is almost as truly-a new vine in its constitution as one raised from seed. We only add that if these eyes start well, they will become fine little plants the first season. It is better, however, to set them out in nursery rows until the second year, before a final planting.

GRAFTING GRAPE VINES.

Another method sometimes used for propagating the vine is *grafting*. Old vines of an inferior sort *may* thus be made over new, in one or two seasons. Wild vines may be dug up from the roadsides and grafted in the Winter, and set out in the Spring. These soon make strong plants.

Protection of Young Trees in Winter.

So many are the losses every year from the effects of Winter, that this subject is worthy of special mention as the trying season approaches. A few words of precaution are needed now:

There are many considerations in favor of fall-planting. One has usually a better lot of trees to select from at the nurseries, than in the Spring. If set out early, the wounded roots become calloused, and ready to emit new roots in the Spring; they may even begin to form roots in the Fall. They are fairly in their new quarters at the very opening of Spring, and ready to start at the first beginning of warm weather. Fall planting saves much time for other work in Spring, which is always a busy season. In the Fall, the ground is warm, comparatively dry, and easy and pleasant to work.

It can not be doubted that the hardiest trees, such as apples and forest-trees, may be set out in Autumn to the best advantage. But those slightly tender—such as cherries, some kinds of pears and shade trees—if taken up in the Fall, should be "heeled in," and protected for the Winter. They will then be in the best possible condition for planting out in the Spring. And here is the way of doing it. On receiving the bundle of trees from the nursery, choose a dry and partially sheltered corner of the garden or orchard, lay open a trench about a foot deep, sloping it off on one side, and making a hillock on that side for the trunks and branches to rest on. It is taken for granted that this trench is made where no water will stand in it. Now lay the roots along in the trench as closely together as possible, the limbs resting on the bank of earth. Cover the roots a foot deep, making a mound over them to shed water. Let also the trunks be slightly covered, for full half their length. It is well to lay a few evergreen bows over the branches; cornstalks may be used, though in moderation, or they will attract mice. As soon as Spring opens, remove all covering, shorten in the branches, and plant.

For trees planted within a year or two past, a slight Winter protection is important, at least in exposed places at the north. The roots of such trees are yet small, and have not recovered from the shock of removal. The main thing required is to cover the entire body of roots with a few inches of extra soil. If coarse manure is at hand, use that, and it will answer the double purpose of protection and enrichment. In Spring, let the manure be worked into the soil. Wherever there is danger from mice, a conical bank of earth, about a foot high, should be made around the stem of every newly planted tree, removing it early in Spring.

A Paying Investment—Plant Trees.

For how much money would you cut down the fruit and shade trees on your farm? Every owner will, in reply, name a sum far above the cost of planting and raising them. This proves conclusively that tree planting will pay. We know of no more certain way to increase the market price and the salableness of a farm, than by stocking it with trees. The satisfaction to be derived from abundance of fruit and shade, the attractiveness thereby given to the *Home*, and its good influence upon the family circle, these can hardly be estimated in dollars and cents.

Now is the time to make this richly paying investment. Commence in the vicinity of the dwelling. The peaches, cherries, and other stone fruits, and tender trees, will be better left until next Spring. For apples, pears, and deciduous shade trees, the best time is when the frost has nearly stripped them of leaves. They become well settled in their places during Winter, and are ready to commence growth when Spring opens. A few essential points need attention in transplanting. Large trees *may* be successfully transplanted by using extra care, but it is generally far preferable to take those of only a few years' growth. In a few years they will outstrip those of larger size, and be of better shape, as they need little pruning when removed.

When taking them up, use great care not to injure the roots, particularly the smaller fibers; these draw most of the nourishment taken from the soil. All injured roots should be pared smooth; they will then heal more quickly. The better the soil is made *before* planting the trees, the more speedy and thrifty will be the growth. It is essential not only that a few feet immediately around the trunk be enriched, but that the whole area where the roots are to extend should be in good condition. If the location be wet, draining must be resorted to, or all other labor will be mostly wasted; the trees will drag out a short and profitless existence.

Make the holes large enough to allow of spreading the roots to their full length, and lay them all out in the direction of growth. Set the trees at the same depth as they originally grew.

If an orchard is to be set out, the following simple contrivance (republished from a former volume,) will enable a person to place them in exact rows. It is merely a strip of board, about eight feet long, with an opening from one side to the center, large enough to admit any tree to be planted, and having also a hole, say of an inch in diameter, near each end. It is used thus:

The ground having been staked out in the usual manner, the board is placed with the center opening over a stake. Now insert two small pins in the ground, through the openings in the end, and lift the board, leaving the pins in the earth. Next dig the hole, and when completed, replace the board over the end pins. The opening in the center shows the exact place the stake occupied, and the trunk of the tree being introduced through the side opening, will be held in the same place, while the hole is being filled, thus greatly facilitating the work.

In planting fruit trees near the house, avoid setting them near fences. Besides the temptation offered to climbers, and passers on the highway, much fruit will be lost by falling and being bruised upon the fence. Let such places be occupied by tall-growing deciduous shade trees, as the maple and elm. Evergreens may come next, then the fruits near the house, where they may be seen to best advantage by the occupants.

Pears in the Northwest.

Mr. C. D. Bragdon gives in the Rural New-Yorker, a lengthy pear talk from the orchard of R. Douglass, who has 1000 to 1400 trees, half of them in bearing, at Waukegan, Ill., on the shores of lake Michigan, 40 miles north of Chicago. By the way, this is in what is being designated as the "North-Western Fruit Belt," embracing northern Ohio and Indiana, southern Michigan and Illinois. Western New-York might also be included, and, in fact, the whole of the country bordering upon the great lakes, and lying between 41° and 42°, which takes in the southern peninsula of Canada West. The great pear-growing region of Boston and vicinity, on the Atlantic coast, is in the same latitude.

Returning to Northern Illinois, we find Waukegan bidding fair to rival Boston in pear culture. The soil varies from a stiff clay to a deep sandy gravel. Mr. D. speaks at length upon the different varieties, from which we extract the following: *Louise Bonne de Jersey*—nothing equal to it on the quince, upon which I would grow it altogether; bears heavily every year, and still grows well; have 30 to 40 trees in every variety of soil and situation. I would rather grow the *Bartlett* on pear than on quince, is not very hardy, but when *headed low*, it endures hard winters here very well. It brings the highest price in market, and is a pear everybody should grow, but will not thrive in very exposed situations. A dwarf Bartlett, ten years from the bud, was loaded down with fruit. *Vicar of Winkfield* succeeds poorly as standard or dwarf. It does not fruit, neither does the *Duchesse d'Angouleme*. The *Buffum* is a fair pear, a good grower, and productive, but does not come into bearing very young. *Belle de Bruxelles*, is a great bearer, fruit large and handsome, but worthless. *Rostiezer* is a good summer pear, and a fair bearer. *Belle Lucrative* is a good bearer on both pear and quince, and the trees are hardy. I think a great deal of the *Canandaigua*, on account of its upright growth and fine foliage. *Onondaga*, or *Swan's Orange*, does not prove quite first rate, but is a good bearer and hardy; it succeeds on both pear and quince, though liable to overbear on the latter. *Seckel* killed some during the hard winter, but will probably be a good tree here on both stocks. It is full of fruit. *Glout Morceau* is a good winter pear on quince; it comes late into bearing, but yields well; is hardy, and sells well, ripening in January and February. *Beurre Diel* is an uncertain bearer, not to be depended upon. *Doyenne d'Ete* is a good summer pear, very productive, and a regular bearer. *Tyson*, good on pear and quince, is rather late in coming into bearing, but promises well. I can not do the *Flemish Beauty* justice; "it bears early and often, and all the time" as a standard. There are hundreds of bushels growing about here. Every tree is loaded, and this variety is considered *the* standard pear for the West—hardy and always productive. The Flemish Beauty on pear, and Louise Bonne on quince, may be emphatically recommended, and a bushel of either sort can be raised as *soon*, as *easily*, and as *surely*, as a bushel of apples, anywhere that apples will grow. This has been demonstrated in a hundred localities, and can be relied on. Such is the experience of Mr. Douglass at the West. In regard to the sureness of the pear crop, Mr. Wm. S. Carpenter, a successful pear grower of Westchester Co., N. Y., who chanced to hear us read the proof of the above, remarked that he would rather raise a bushel of pears than apples, considering them a more certain as well as a more profitable fruit.

Pruning Trees at time of Transplanting.

Here is a mooted point, with something to be said on both sides. Certain theorists declare that a tree should *not* be pruned at the time of transplanting, because it needs the branches to elaborate material for new roots. The roots are weakened just in proportion as the top is diminished. Leave on the tops, it is said, until the roots are partly restored, then (say, the year after removal,) give the top a moderate pruning. That a tree closely pruned *looks* bad, no one will deny. On the other hand, it is replied, every newly dug tree has many of its roots cut off or mangled, and we must diminish the top in order to maintain the balance of parts: otherwise, the superabundant branches will pump the feeble roots dry. With care a tree may be transplanted, without pruning; but experience shows that one suitably shortened-in will recover from the shock of removal, and make a more vigorous growth in three years than one not pruned. If small trees are taken up with care, and immediately set out in the same garden, they may require little or no shortening-in. This is often done by nurserymen. But trees taken up in haste, and in the rough, bungling way often practised, and then exposed to sun and wind, one, two, or more days, can hardly be expected to live without vigorous pruning. Better prune at this time, and seldom use the knife afterward.

Upright Trees.

When crooked, lop-sided, leaning trees are seen in a wild forest, we call them picturesque, and let it go. But when we see them in a neighbor's orchard, (or our own), or by the roadside, or in a lawn, we say somebody is to blame, for generally it comes from sheer neglect. As to *leaning* trees, the history is something like this: when first transplanted from the nursery or the woods, they are straight and tall. They are set out in exposed places, and not being staked and tied up, they soon get out of the perpendicular. This is not to be wondered at, considering the smallness of the roots, and the softness of the soil. It is a very easy matter to prevent this. Let every newly planted tree be staked and tied up, using broad and soft bands to prevent chafing the bark. Or, in the lack of stakes and bands, use heaps of stones laid over the roots on the windy side, which will ballast them. In case a tree gets thrown over, it can be righted up by loosening the earth about the roots, and then drawing it up and fastening it to a stout stake. If it has stood leaning for several years, it may be necessary to use an ax on one or two obstinate roots. But by all means get every tree up straight and then keep it up.

A Talk on House Plants.

None can deny the pleasantness of house-plants in Winter. When the hills are clad with snow, and the cold winds howl about our windows, it is not the least promoter and token of comfort and home content, to see a fine stand of plants, blooming and green. They need not be of rare and costly varieties; the number need not be large; only let there be a collection suited to the circumstances of the household, let them be well kept, and the sight will please every eye. We have often noticed how even a single plant in a window redeemed the room from barrenness, gave it an air of comfort and refinement, and prepared us to think well of the occupants. It diffused a certain air of culture and taste through the apartment, a something purer and higher than could come from the most splendid display of rosewood and gilding. Yet it appears that of late years there are fewer *good* collections of house-plants than formerly. Why so? Because our modern houses are made so tight as to exclude nearly all fresh air; because we heat many of them with coal-stoves or furnaces, and light them with gas. Here, then, comes up the practical question of how to grow house-plants successfully?

1. A first requisite is a suitable degree of *moisture*. Who does not see, every year, fine plants at the kitchen window, and poor ones in the parlor? And this, because the evaporation of water from the cooking-stove or range, supplies the air with an abundance of moisture. Some plan, therefore, should be contrived for generating a healthy degree of moisture in our parlors and living-rooms. It is not impossible to do this. A house warmed by a furnace, should have a broad pan of water in the hot-air chamber, or an evaporator at the register of the room containing the plants. Pans of water may also be placed on the plant-stand, whose slow evaporation will be of some account. Rooms heated by coal or wood stoves, should have some vessel of water on them continually evaporating at least a quart or two of water daily.

Here is another method: nail a cleat on the outer edge of the plant-table, or the edges of the shelves, raised an inch or two higher than the surface of the table or shelf. Set on the pots in their saucers, then fill up the spaces between with moss, or sand covered with moss. The appearance of the moss will be ornamental. Moisten this moss and sand thoroughly, morning and evening, and this will diffuse a constant moisture among the leaves. The roots must, of course, be watered. No universal rule can be given for this, some plants needing much, and others only a little water. Those at rest require only just enough to keep them from wilting. Those in active growth and bloom need much more. For the majority of such plants, the simple demand is that the whole body of the earth be kept moist, not wet. See that the pots are well drained; then water may be poured in freely, and with little risk of harm. To find out when a plant needs watering, examine the soil with a sharp stick, or better still, by rapping the sides of the pot. If it gives out a hollow sound, the plant needs more water. Then give

it enough to saturate the whole mass of earth, and to run through into the saucer. Do not water again until necessary.

3. A suitable amount of *light* is needed. For the first half of the Winter, there is little danger of too much light; but after the month of January, the mid-day sun becomes a little too bright for some sorts of plants. This is the case especially with those in a half-dormant state. Drop the curtain at mid-day, or let these plants be kept in a somewhat retired part of the room. For others, an abundance of light is needful, if we would have well-formed and well-colored blooms, and healthy foliage. A south window is of course the best aspect, and next to this a southwest or southeast window. Turn the pots around once a week, or oftener, to prevent the plants becoming one-sided and drawn up.

3. The amount of *heat* should not be overlooked. As dwellings are now constructed and warmed, there is more danger of over-heating than the opposite. A few plants—those especially of tropical origin—require a high temperature, but the majority thrive best at a moderate heat. Those commouly kept in parlors require about 40° by night, and 60° to 65° by day. Much harm is often done by sudden fluctuations of temperature, caused by letting the fire go down at night, and by opening doors and windows when the air outside is too cold.

4. And this suggests the subject of *ventilation*. Frosty air should not be allowed to blow directly on the plants, yet they need fresh, pure air. In their anxiety to keep their plants warm, many persons confine them continually in air which has long been filled with the odors of vegetation, the gases from the stove or furnace, and the dust of the apartment. As often, at least, as once a day, the window or door of an adjoining room should be opened, and a current of pure—not cold—air, should be made to blow through and among the plants. Whenever the mercury is above the freezing point, a window in the room should be dropped from the top. It were well, also, if all the windows of the room be so loose at the joints as to allow fresh air to steal in continually, and thus give the plants constant refreshment.

These are the main neccssities of house-plants. It is a good thing to syringe them daily overhead with tepid water, or to wipe off the dust from the leaves with a sponge. Insects should be guarded against. Many can be killed by thumb and finger; indeed, we have known a large set of plants kept clean by five minutes daily manipulation. For those who don't like this, a decoctiou of tobacco leaves, or whale-oil soap, answers au excellent purpose. Stir the surface of the soil in the pots frequeutly, to prevent it becoming hard. Among the plants which succeed well in rooms, we name the following, for a small assortment: *scarlet geraniums, monthly roses, pelargoniums, African lily, fuchsias, monthly carnations, striped abutilon, petunias, ivy-leaved geranium.*

Winter Covering of Strawberry Beds.

All experience shows that in gardens at the north, strawberries are benefited by a little protection in Winter. The *alternations* of temperature do more harm than any amount of mere cold. In Maine, Canada and Vermont, where the snow often lies from Novcmber until April, there is less need of artificial protection than in N. Y., Penn., and Connecticut, where the snow comes and goes continually. In dry sandy soils, too, there is less harm from frost than in heavy, clayey lands; in the latter, the plants are often thrown out and killed by the freezing and thawing of a single Winter, or open Spring.

But what is the best material for such protection? The material with which nature covers her strawberry patches is leaves. And if one will use leaves, and then take the trouble to cover the leaves also, to keep the winds from blowing them away, nothiug can be better. We have used them, covering them with old peabrush and the canes of last years raspberries, etc.; but the winds of an open winter would blow them off from many a plant. We have used straw, but sometimes mice would burrow in it and nibble off the crowns of the plants. Coarse, littery manure does very well, but it brings in weeds, and so makes work for next Summer. Saw-dust answers a good purpose, but it often brings in grubs. Old tan-bark suits us about as well as anything. It is our practice to apply it late in the Fall, covering the leaves about one inch, and then removing a part of it in the Spring, leaving the rest for a mulch in Summer. We have used it now for six years, and find no serious fault with it. It is a perfect protection in Winter, harbors no vermin, brings in no weeds, but rather keeps them down. It is one of the best equalizers of temperature the year around, in Summer saving the necessity of artificial watering. As to its affording the plants a specific manure (tartaric acid,) as some assert, it is unnecessary to express any opinion.

Terraced Gardens.

That a hill-side garden has a fine appearance when thrown up into terraces, there can be no doubt This is owing, partly perhaps, to the appearance of art displayed in the work; partly to the emerald grassy slopes intervening regularly between the rows of bright flowers planted on them; and partly to the bold, conspicuous manner in which it throws up to view the forms of the plants, presenting the whole mass at one view, like plants on the stage of a large greenhouse. Whatever the reason, the fact is evident.

Whenever the hillside is so steep that it can not well be worked into natural, flowing slopes, we would recommend terraces. Yet they must be made with care, or frost and heavy rains will soon break them down. A long, straight line of terrace is much more likely to slide away than a flowing curved line. If such a straight terrace must be made, it is important to break it up, at convenient distances, into buttresses, which will give very much the same support that they do in a wall of stone. Furthermore: the upper and outer edge should not be made too sharp; for the frost and hot suns will be sure to destroy the grass upon it, leaving bare and crumbling patches of ground.

On such terraces we would recommend planting shrubs and other plants which stand up somewhat boldly above ground. Trailing plants, such as the verbena, portulacca, etc., would, of course, produce no marked effect. Shrubs and herbaceous plants should be intermingled, and so arranged that at least a portion of each should be in bloom all the season. Of shrubs, a good assortment would include the Japan quince, lilacs, spiræas, deutzias, syringas, upright honeysuckles, weigelias, altheas, euonymus and perpetual roses. For herbaceous plants we name Dielytra, Peonies, Monkshood, Canterbury Bell, herbaceous spiræas, Phloxes, Lilies, Dahlias, Scarlet Geraniums, Gladioli, etc. An occasional vine well fastened to a stake or ornamental pillar would have a fine effect.

The Pampas Grass.

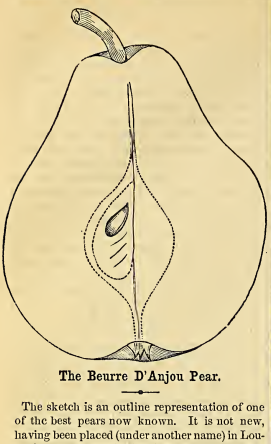
Among the novelties of the day, in the ornamental line, few things are more desirable than the Pampas Grass, (*Gynerium argenteum.*) It is a native of Brazil, and therefore requires some protection here, in Winter, though we understand that in England it endures the hardest frosts. No description that we can give will convey a just idea of it to those who have not seen it. It resembles the Tritoma, somewhat, though the leaves are much longer, and more rush-like. They often reach six and eight feet in length, bending over at the top as gracefully as a weeping willow. They are bluish or silvery green in color. But let us turn the description over to an enthusiastic cultivator: "It is a perfect fountain of green foliage and feathery flowers which, under a brilliant sun, appear spangled with silver..... It throws up from ten to forty stems, terminated with a panicle of light colored flowers." Another writes: "I have a Pampas Grass with over forty flower stems, ten to thirteen feet high. It might be described as a fountain of vegetation, acquiring more and more force from day to day, till at last the gushing fluid springs up into jets of living silver!"

Now, a plant which produces such jets of rhetoric must be worth looking after. We have seen it for several years, and watched its habits, and though it has not made such grand displays as the above would lead one to expect, it nevertheless has proved an interesting object. For the finest display, it should be set in the middle of an oval bed, and surrounded by other plants of similar foliage. Among these we may mention the several tritomas and the gladioli. The soil should be deep and rich. An occasional watering would promote the rapidity and luxuriance of its growth. In the Fall, as soon as the first frosts appear, it should be taken up and set out in a large pot or tub, and then removed to the cellar for the Winter. A retired corner of the green-house would answer better. South of Washington, this winter protection would be unnecessary, and there it would attain a perfection in size and luxuriant flowing which can not be expected at the North. Still, it is well worthy of all our care, even here.

Tree Mignonette.

This is nothing new. It is only the common annual plant, brought under the following treatment: Pot a single plant, and when it has attained a strong growth, trim off the side branches and tie up the central stem to a neat stake. As soon as the blossom buds break at the top, nip them off. The leaf-buds below will again push out, and may be allowed to grow three or four inches long. After a while, a few blooms may be suffered to form, but let them not go to seed. Follow up this practice perseveringly, and in a few months the soft, succulent stem will become woody and rough, like a shrub. It will then live for ten or fifteen years, and blossom nearly all the time.

THE "GREAT AUSTIN SHAKER SEEDLING" STRAWBERRY.—Continued inquiries, impel us to say again, that we can not recommend this variety for general cultivation, while there are so many others better. It is large and prolific, and late—the last named, its chief recommendation—but it is soft, does not bear carriage well, and has not the best flavor. It has strong advocates, but the above is the more general impression.



The Beurre D'Anjou Pear.

The sketch is an outline representation of one of the best pears now known. It is not new, having been placed (under another name) in Loudon's select list of 1834, but is of comparatively recent introduction here, under its new cognomen. It grows finely on the quince stock. The writer has fruited it during several years.

The tree is a moderate grower, of good form, the wood and leaves bright and healthy, and it never suffers from the hardest winters. The fruit is nearly as large as the Bartlett, though of different shape; in quality it is fully equal to that favorite variety, and of sweeter flavor. In the language of the fruit books, it is "large, long, oblong, obovate, pyriform, obtuse at stem; color, pale yellow, dull blush, and numerous small specks of faint russet; calyx open, segments thick, reflexed; basin round, not deep, russeted; stem short, curved, and obliquely inserted in a shallow cavity; core small; seeds long, pointed; flesh yellowish white, melting, juicy, vinous, sprightly, delicious to the core. Ripens in October and November." In those sections where the Easter Beurre does not mature well, and so make a good winter pear, this is a good substitute, though it is not quite so late. We often keep them into January. Gather in mid-October; pack in half bushel boxes, putting on a loose cover. They may be ripened up in November, though if kept in a dark, cold cellar, they will last till New-Year's.

How to Keep Apples.

Late last Spring we were enjoying apples picked and packed the previous October in Western New-York. They were as fresh and juicy as the day they were put in the barrels. The secret of their long keeping is worth knowing by all Eastern people who order their fruit from the West, and who have lost much by the bruising of the apples on their long journey. They were packed, when they were shipped, in oats, and have been kept in a close, upper room through the Winter. The advantages of this method are several. You get oats for about thirty per cent. less than the price in the eastern market. These are handy for the horse, if you keep one, and for the hens, if your stock is limited to a few fowls. They preserve the apples from all bruises on their passage, by rail or canal, which is impossible without something to fill up the crevices. As the freight is so much per barrel, there is no additional charge for the oats. The oats are a great safeguard against rotting, where the apples are kept in a close, tight room, without fire. The close room, and the still closer envelope of the barrel and the oats, guard against the sudden changes of temperature so common in our winter climate. With the thermometer at zero out of doors, they will not freeze. If they should be frosted a little, it is drawn out so gradually by the oats, that they are not injured. We have never seen any method so satisfactory as this for transporting apples, and none better for preserving them in good condition until Spring.

But in the multitude of counsellors there is wisdom. A friend of ours has just presented us with a dish of his apples, which are very well kept in his way. He packs them in tight barrels, in the orchard, in the Fall, with the *dry* leaves of the apple trees, a layer of apples, and a layer of leaves. This keeps them from bruising, and the leaves absorb the moisture, and prevent rotting. His barrels stand in a chamber, and do not freeze through the Winter. This method works admirably with him, and is certainly worth trying by those who raise their own apples. (We have known apples packed in leaves, the barrels subjected to very rough handling, to be opened in London, sounder, fresher, and of better flavor, than any imported apples which the person to whom they were consigned had ever before seen, so he reports.)

It is a matter of very great importance to be able to keep this fruit through into the Spring months, in good condition. It is not only a comfort in the family, but adds much to the profits of the orchard. A hundred barrels of winter fruit, worth but $200 in October, will frequently bring $400 or more in March, or April. It is by particular attention to such small items as these, that a farmer gets ahead in the world.

To Abolish Fruit-Stealing.

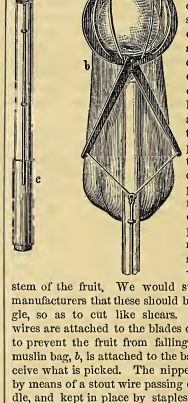
As we grow older (and more charitable?) we are the more inclined to think that the stealing of fruit springs from an ignorant, heedless sportiveness, rather than from deliberate wickedness. They who steal have never learned how much time and labor it costs to raise fruit; and seeing it in tempting plentifulness around, they think it can harm nobody very much if they take a little. We do not justify this, nor do we deprecate the use of legal suasion, at times; but would not a little moral influence and tact also be well? To a family given to purloining grapes, we would send a dish of fruit as a present. Would they not be ashamed afterwards to rob their benefactor? Certainly they would, unless they were heathens. Perhaps, in another case, we would present them with young plants of the grape, or young fruit trees, teach them how to plant, and prune, and train them. Heap coals of fire on their heads. Wouldn't they wince under the scorching!

Uses of a Garden Frame.

A garden frame is very easily constructed. Take 1¼ inch planks—one about eighteen inches wide for the back side, and another nine inches for the front, and each from ten to fifteen feet in length. For ends, use planks of same thickness as sides, about five feet in length, and tapered in width from that of the back plank at one end to that of the front at the other. Cover the inclined top with sashes, arranged to open either by sliding or by hinges. Such a frame is useful in three ways: 1st, in early Autumn, to dry apples and other fruits in; 2nd, at the approach of Winter, to set over a cold-bed; and 3d, to cover a hot-bed in early Spring. The whole cost is about $5, and in forwarding early vegetables alone such a frame will pay on every farm.

Another Fruit-Picker.

At the present rate of invention, varieties of fruit-pickers will soon equal the number of churns or washing machines. Several new ones have been shown at the office of the *American Agriculturist* this season, in addition to those already described in our columns. The one figured here has several excellent features, and appears adapted to the purpose designed. The picking arrangement consists of a pair of large nippers with sharp knives, *a*, which cut the stem of the fruit. We would suggest to the manufacturers that these should be set at an angle, so as to cut like shears. Semi-circular wires are attached to the blades of the nippers to prevent the fruit from falling outward. A muslin bag, *b*, is attached to the back part to receive what is picked. The nippers are worked by means of a stout wire passing down the handle, and kept in place by staples at proper intervals. Near the lower end of the pole or handle, the wire is attached to a tin tube, *c*, which slides loosely upon the handle. This enables the operator to readily move the wire up and down to open and close the nippers. The apparatus is light, neat, well made, and not expensive, the retail price being $1.25. It is manufactured by T. Evans & Bro., Newark, N. J.



Migration of Birds in Winter.

Some species of birds remain in the northern States during the Winter. The crow, the woodpecker, the yellow-bird, a little transformed, and a few others spend nearly the whole year at the north. Beside these, we have a few visitors from Arctic regions, who like our winters better than their own, but can not endure our hot summers. But the majority of our Summer birds go southward on the approach of Winter. It is an old notion that swallows spend their winters here, in sand banks or in mud at the bottom of ponds; and that robins hybernate in hollow trees and in caves in the forests. We have no faith in this. Now and then, a robin or other bird, overtaken by Winter, may spend the cold season here, feeding on seeds and berries, but this is doubtless an exception to the general rule.

For the American Agriculturist.

Preserving Specimens of Birds and Animals.

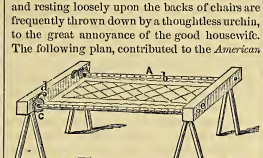
BY ROBERT L. WALKER.

The following plain directions for preserving specimens of birds and animals are given by a practised hand, who condensed them from three or four different processes which he had tried without satisfactory results. Secure the bird or animal with as little injury as possible; sprinkle plaster Paris wherever there is any blood, to absorb it. You will need a very sharp small-bladed knife, a pair of sharp pointed scissors, a pair of wire nippers, a pair of cutting nippers, different sized wires, and glass beads for eyes. You will also need arsenic, powdered plaster of Paris, cotton, and arsenical soap, which is made as follows: Take 8 oz. white oxide of arsenic, 8 oz. hard rosin soap, 1 oz. quick lime, 1½ oz. salts of tartar, 1 oz. gum camphor. Dissolve the soap in a sufficient quantity of rain water by heat, to make a mixture the consistence of cream. Add the arsenic and lime, previously well mixed. Then remove from the fire and add the other ingredients, previously powdered and mixed. Add warm rain-water until it becomes the consistence of good thick cream. Then put into a wide-wouthed jar and cork air tight.

Having every thing ready, we will now proceed to skin the bird. Make an incision through the skin from the lower end of the breast bone to the anus; separate the skin on both sides from the body, until you reach the knee and expose the thigh, take the leg in one hand and push the knee up, and loosen the skin around it until you can place the scissors underneath and separate the joint and muscles. Sprinkle arsenic on the skin to prevent adhesion, loosen the skin about the base of the tail, and cut through the back-bone at the last joint, taking care not to sever basis of the quills; suspend the bird by placing a wire hook in the back or rump, and invert the skin, loosening it carefully from the body. On reaching the wings, loosen the skin from around the first bone, and through the middle of it, or if the bird is small, separate it from the next at the elbow. Continue the inversion of the skin by drawing it over the neck until the skull is exposed. Loosen the ear from the skull without cutting or tearing it. Cut the membrane around the eye-balls, and dig out the eyes, then clean out the sockets, and fill them with cotton mixed with the arsenical soap. Take out the throat, tongue and all other fleshy parts. Then take the brains out from the back part of the skull, which cavity fill with cotton and arsenical soap. Dust every fleshy or bloody place with arsenic. Take a wire the length of the bird, pass it into the skull and out at the tail, then take two pieces of wire and pass one through the wings close to the bone; the other you will pass up through the sole of the foot, along the leg bone and on to the wire in its back; fasten the back wire and leg and wing wires securely where they cross each other. Then force the glass beads or eyes into the sockets. Stuff cotton anointed with the soap into the upper part of the throat. Next make a roll of cotton less in thickness but same length of the original neck, anoint it with the soap, put it into the skin, and push it up to the base of the skull. Fill the body up with cotton anointed with the soap. Sew it up, commencing at the upper end and passing the needle from the inside outwards. Then press the body into its natural shape, bending the wires to suit. Lay it away until it dries and the skin becomes hard. The directions for birds will answer for animals. The incision must commence between the fore legs and extend down to the tail. Be very careful not to stretch the skin. Smooth the fur down, and press into natural appearance.

Convenient Quilting Frame.

The quilting frames in ordinary use are an almost unmitigated nuisance. Except in the largest apartments they monopolize the room, and resting loosely upon the backs of chairs are frequently thrown down by a thoughtless urchin, to the great annoyance of the good housewife. The following plan, contributed to the *American*



Agriculturist by S. A. Newton, Susquehanna Co., Pa., remedies these inconveniences, and also gives a much better means for stretching and holding the quilt to its full tension. The two bars *A* are from 7 to 8 feet long, or a foot longer than any quilt. They should be 2½ inches thick, made eight square, and perfectly straight. A strip of cloth, *b*, is tacked to each bar, to which the quilt is to be attached. One end of each bar is fitted with a rachet wheel, *c*. These rachet wheels are attached to iron caps which fit upon the head of the bar. The pinion of the wheel has one end sharpened to insert in the bar, and the other extends outward through an opening in the horse which supports the bar. The other end of each bar has the cap and pinion without the rachet wheel. The caps serve as bands to prevent the ends of the bars from splitting. The horses are made of convenient hight, with a sufficient spread of legs to stand firmly. Two dogs, *d*, are attached to one of the horses, to work in the rachet wheels, and hold the quilt in place when stretched. The bars of the horses should be just long enough for quilters on opposite sides to reach over the quilt bars and meet half way. As fast as a section of the quilt is finished, another part is unrolled by lifting the dogs and rolling the bars, until the whole is completed. If rachet wheels made of iron for the above arrangement can not be easily procured, they may be made of hard wood, and fitted directly upon the ends of the bars, which could be reduced in size to work in inch holes in the horses.

Something Useful and Ornamental—Newspaper Receptacle.

To the Editor of the American Agriculturist.

We are making an ornament for our sitting rooms, in this part of the country, in the form of a newspaper receptacle. It is so useful, and at the same time so beautiful, that we wish every family had one. Take a common hat-box, cut it down lengthwise into two equal parts, either through the wide or narrow sides. Each half, with half the cover for a back, makes one receptacle. Cover with some delicate color of wall paper. One yard of paper will, with economy, cover three. Put on a border to harmonize with the paper around the upper and lower edges, and sides of the box. Crimson and gold is pretty, with almost any colored paper. Fine gilt leaves—cut out and put on in the form of a vine for a border, are also beautiful. Then look over your old illustrated magazines for a choice engraving, and when you find one to suit you with regard to subject, size, and shape, cut it out and paste it upon your receptacle, taking care to have it directly in the center of the front, equi-distant from the sides and edges. Put a narrow gilt border around the picture, unless it is oval. A square picture, or one that is a little wider than it is long, looks prettiest. Put in three cords, each a yard or a yard-and-a-quarter long, one in front, and one on each side, bring them together and join them with a pair of tassels, or a pretty bow of the cord. The holes for the cord should be made small, and near the upper edge of the receptacle. Put in the newspapers neatly folded, and hang it in the brightest part of the sitting room, just opposite the door that husband or brother comes in at, and you may depend upon it it will add greatly to the attractions of your home. We advise every lady that has not already something of the kind to make one immediately, and henceforth have a place for the last newspaper. GERTIE ELOISE.

For the American Agriculturist.

A Short Story for the Times.*

Best Medicine for a Sick Wife, and How to Obtain it.

"Good morning, neighbor Slack. How do you do? How is your family? you are looking downcast."

"Good morning, neighbor Thrifty. Wife is not very well. I'm not sick, but am rather blue—about discouraged. With the war and hard times, poor crops and wife half sick all the while, its pretty hard getting on. I wish some one would come along and buy my farm; I'd move into the village and try my hand at something else."

"Sorry to find you feeling so badly. Is Mrs. Slack no better to-day?"

"No, and if she was, she'd over-do and get down again to-morrow. We don't feel quite able to hire house-help, and with all her work and her sewing which keeps her up late at night, it's no wonder she, poor woman, does not feel any better. She thinks if she had a sewing machine like your wife's, she could do better, but we have not felt able to buy one. How it is that you keep so forehanded, is more than I can tell. My farm ought to be as good as yours, for it's the same kind of soil and as large; four years ago I thought myself more forehanded than you, and my wife was stronger than yours."

"Just so. When we commenced here the balance was in your favor I am sure."

"Yes, yes, but some folks are born to mis fortune, and that's precisely my case."

"Fortune favors those who favor themselves. I don't believe much in this theory about fortune, or luck. Management is the thing after all."

"Pray give me a hint or two about management. Talk plainly, for I am despondent enough to catch at any word of advice, however plain."

"Well, pretty large results sometimes spring from little things. 'Tall oaks from little acorns grow,' we used to repeat in childhood. My first start was from that extra crop of wheat, four years ago. You know I turned in a great growth of clover, while you fed yours down; and though you sold the most butter, I had a double crop of wheat which brought $1.50 a bushel that year. This put me out of debt, while all the proceeds of your butter went to pay the doctor's bill for your wife, who broke down over the butter bowl."

"That's so. But it was your good luck that led you to plow under the clover."

"No, it was not luck. I read a chapter about the use of clover in my agricultural paper, and followed its recommendations, because they stood to reason.

* We print the above just as sent to us by a Michigan subscriber. We know the machines referred to were called for in the town indicated, and probably the story is not simply "*founded* on fact"—but a literal fact itself.—ED.

My paper cost me a dollar for the year, and that one article gave me ten bushels per acre more of wheat than you get, on the twenty acres, which was so much clear gain, except hauling the extra grain to market. This made me a clean $300 profit."

"Just so, but if your wife had been sick enough to have used up the wheat you would have been as bad off as I. Your good luck favors you."

"But she had no butter to make for market, and that saved her strength. I have tried in various ways to save her strength as well as my own. She has a machine that does up our sewing in short metre, and she goes to bed and sleeps and rests, instead of stitching until midnight, and feeling dull and mopish in the morning and all day. She also has her machinery to help on washing day, and does not complain of lame shoulders from wringing out clothes as she used to do."

"But how did you buy them, if you first paid up your farm debt with that extra wheat crop?"

"I earned them at odd spells. Don't you remember I called one evening two years ago, and asked you to subscribe for the agricultural paper? I was going to tell you about how it helped me, but you bluffed me off short by saying 'you didn't want any book farming.' I was offended and did not press the matter, but I went to others and kept at it, and wife helped me among the neighbors, and her sister in ——— also helped, and so we finally made up a club of 130 names, and received our sewing machine as a present or premium. The editor gave it to me for my trouble, and the only expense was $1.75 for freight. Last year I got over a hundred names again, and received a subsoil plow for myself, a wringing machine for my wife, and some agricultural books besides, which furnished good and instructive reading. It would do you good to come over on Monday and see wife wring out her washing in a few minutes, without ever getting tired. This year I am going to get a washing machine while the editor speaks well of it in his premium list. I begin already to see good effects from my subsoil plow also, and the other new thoughts and hints I have been getting from the paper all along, have made me think more, and farm more with my brains, as Tim Bunker says. Wife reads the paper also, and says she gets many good hints about her work."

"I see it all. I am sorry I answered you so sharply about book farming. Pity you did not call on me again when I was in better mood. But its all my own fault, and it's too late to remedy the matter now. If I can raise a dollar I must have the paper at any rate. Put me down on your list any way, and I'll get the dollar for you to-morrow."

"Not too late, as it happens. I have got twice as many names now as I need to get the washing machine, and I had thought about trying for the Cyclopædia premium, that is, 16 large books containing information about every thing. But I am very busy this Fall, and I'll give you the list of surplus names. With a little effort evenings and at town meetings, and going out of the town, you can soon make up a list large enough to secure your wife a sewing machine. It will be the *best medicine* for her, I am sure. If you can't get the 130 names at 50 cents each, you can at least get 90, and pay the extra 20 cents on each yourself, if necessary. You can see the list of premiums in my paper, which I will lend you until you can send to the editor for a sample copy which will be forwarded for 10 cents, or even free, if you promise to use it in getting up a club. You can do best by hurrying up the matter now, for the Publisher of the *American Agriculturist*, (New-York City,) offers it the rest of this year free to all names sent in soon."

"I am very much obliged to you, neighbor Thrifty. I'll come over early this evening for the paper, and any instructions you can give me about getting names. Good morning. I will take new courage, and wife will too, when I tell her about the new medicine. The hope of it, will do her good. I have got a new hint. I have complained of ill luck in having a sickly wife, and many a man has broken down under this. But it's my own fault. I ought to have got labor-saving implements for her, as well as for my own work. She has broken down under day and *night* labor—sitting up until midnight to finish her sewing, while I have slept and rested. It shall be so no longer. Thank you again for your plain, instructive talk. Good morning."

Middlings, Shorts, etc.

Several contributors to the exhibition of Corn Bread, intimated that rye flour is quite as good as wheat for mixing with corn meal for the manufacture of cheap, sweet and wholesome bread. This is probably true, excepting as respects color, and that should be a secondary consideration. One contributor has commended wheat *middlings* as better than fine flour, saying that the last running from the bolter above the bran was intended, but suggesting modestly that we might substitute a more suitable term. That would be impossible. *Middlings* is just the word. It means, neither very coarse nor very fine, but half way between the extremes. As applied to the products of wheat, it has been long used to designate that which is finer and of lighter color than the bran, but darker and coarser than the flour. The products of a bushel of wheat are sometimes distributed by the miller into as many as seven grades. In ordinary bolting for family use, seldom are more than four grades made, and oftener perhaps but three—the flour, the middlings and the bran. If, on this principle of distribution, the miller should return, for a bushel of wheat, 25 lbs. of flour, 20 lbs. of middlings, 12 lbs. of bran, it would be evident that some of the flour and some of the finer parts of the bran had gone together to make the middlings. This shows what middlings are; but to ascertain their value, as food, we need to examine the kernel of wheat, to see of what its several parts are composed, and which of its parts go to make up the middlings after grinding. First, there is the body of the kernel, consisting very largely of starch. This is surrounded by a 3-fold coating, outer, middle and inner. The outer coating is little else than hard, woody scales; the middle contains much gluten; and the inner, which is quite thick, is almost wholly of gluten; while the enclosed interior as we have said above, is principally starch, having a little gluten disseminated among its particles.

Now it is manifest, that if we grind and bolt wheat so as to make but two grades—fine flour and bran, the entire substance of the skin goes with the bran, and never finds its way into the bread tray; whereas, if we make some twenty pounds to the bushel of a middle grade, we save the glutinous inner coating; and whatever of food value there is in the middle coating is saved. These, together with a little of the fine flour, make up the middlings, darker in color, but more palatable than the flour, and of far greater value as food, because they contain more gluten, this being the only substance in wheat which supplies material for the tissues of the body, especially for the muscles.

Bread made of wheat middlings, or of these with one half corn meal, gives to the human form a more perfect development, more health, strength, symmetry and beauty, than that made from fine flour, and would sustain life much longer, if used as the only food. The finest bread is not the best for common use. The whitest is not. That which contains most of the matter of which bone, sinew and muscle are made, will make better developed men and women. Especially will it be so, if we supply it to our children in the growing period. We therefore vote for a full supply of *middlings*, and for a good share of corn meal in the batch. Wheat contains hardly oil enough to make it the best constant food. Corn contains rather too much. Mixed in equal portions, they are about right. Let us honor the brown loaf. We should forget the whim, that whiteness and fineness are the only qualities of good bread, and let us look rather for what will make vigorous, stalwart men, and strong, healthy and beautiful women.

Don't Buy a Pound of Butter.

Buy a firkin or a pail of it at a time, now that cool weather allows of its being kept sweet for a long period. This advice is intended for the very large class of readers of the *Agriculturist* who live in cities and villages, many of whom buy their butter at the grocery only as it is needed from day to day. This is an extravagant practice. Butter, for which the farmer would gladly receive from sixteen to twenty cents, according to the season, costs the purchaser from twenty to twenty-five cents by the small quantity. But, aside from this, grocery butter is seldom of as good quality as that purchased directly from the producer. Dairymen and women are really not as particular with butter "for the store" as with that made for private customers. "What is the use of *my* taking pains," says Mrs. Perkins, "when my butter will be put with Mrs. Slack's, and Mrs. Hasty's, and a dozen more lots of poor stuff. It won't bring any more, and I shall get no credit." But order a pail from Mrs. Perkins, and she knows that unless it be good, she will hear from it. Then, too, the butter for sale at the grocer's has often been brought from a distance, exposed to the heat, and in retailing, it is opened to the air, and subjected to the not over-nice manipulations of the clerk in weighing, etc., and by the time it reaches the table its glory is departed. Almost all our readers have some acquaintance in the country from whom they can engage a supply of butter for the Winter. Now is the time to do it. Butter made from the sweet after-growth of the meadows, before the frost has partially withered the grass, and while the weather is cool, if properly worked and packed, will keep sweet until next Spring. Send to such an acquaintance an order for what will be needed, with directions to have it packed in stone jars, or in new sweet firkins, and you will rejoice in your foresight over every plate of well-buttered "buckwheats" during the Winter.

"Old Maids."

We heartily endorse the following kindly words from the pen of Henry Ward Beecher, in behalf of a class whose good deeds have never been appreciated. He says: "I have no sympathy with that rude, unfeeling, and indelicate phrase, *old maid*, which is bandied about in the mouths of rude, unfeeling, and indelicate persons. It is true that a selfish nature, cut off from all duties and ties, and sinking back into the solitary life of a selfish heart, becomes most unlovely, and useless. But shall the few cloud the true nobleness of the many? How many elder sisters, it may be unblessed with outward comeliness, have entered into a brother's or a sister's family, and accepted all its cares as the duty of their life, and, joining hands with the mother, given to each child, as it were, two souls of love, like two wings of God, to help it fly up withal from weakness and ignorance to manhood and strength! How many have cheerfully given up their own whole life, built no nest, sought no companion, but sang in the tree

and near the younglings of another's nest, patient in toil, watchful and laborious in sickness, frugal amidst poverty, rich in nothing but good works, and in these abounding in wealth! When the roll is read above, and they are named that lived in self-sacrifice, in gentleness, in patience, in love, and in the only triumph of disintcrested mercy—they who are unmarried and childless, that they might more heroically serve the households of others, and become mothers to children not their own—shall stand high and bright."

The "Corn" Crop.

Not Indian corn; but a less profitable crop, one which causes more vexation than any other crop of its size. The crop of toe-corns is a slow, but a very sure crop. It grows with equal facility in all climates and in all seasons. It springs up on the feet of youth, gains strength in older soil, and culminates in the bunions and stiffened joints of old age. Like dock weeds, brambles, and other nuisances, it grows where not wanted, with the difference, however, that those cause no pain, while this causes much. Why are corns raised? Look at your children's toes, and the answer is plain. Parents and shoemakers are responsible. Two causes contribute most largely to their formation and growth; 1st, shoes too tight. 2nd, shoes too loose. For every corn caused by loose shoes, a thousand are caused by shocs too tight. Most parents are stupid enough to think that the beauty of a child's foot is increased by making it appear small. It is strange that such nonsense should prevail this side of China. The young feet are cramped into shocs of the villainous "stump-toed" fashion of the present day; so short in front, that they compress the toc-nails, causing them to grow inwards, and thus give great trouble; and so narrow that one or two toes are piled upon the others, instead of being allowed to touch the sole of the shoe, as they should. Each step taken helps on the corn. When the shoe is taken off at night, you may notice certain little red spots, which, however, fade away after the child has kicked about the bed for half an hour. These are the foundations of corns. When that child is twenty years old, they will give trouble; and perhaps even long bcfore—if not remedied now.

If you plant your child's naked foot upon a piece of paper, and make a pencil mark round it, you will be astonished when you compare the diagram you have drawn with the size and shape of the sole of the child's shoe. You will say at once that you will have no more such shoes. That is the only safe conclusion; act upon it at once. Tell the shoemaker that he shall make no more shoes for your child, unless he will consent to adopt the model of the foot, instead of the wooden thing which some blockhead has made to take its place; and insist, as an *ultimatum*, upon their being large enough, but not too large. T.

Slings for the Wounded.

MR. EDITOR:—May I say a few words on the subject of slings? I have lately met several men with their arms tied up in the most uncomfortable slings. They looked like returned soldiers, and I *longed* to go up to them and say "my dear friend, *do* let me tie your sling more comfortably," but fearing they might think me an escaped lunatic, and take to their heels accordingly, I resolved to say a few words through the columns of the *American Agriculturist*, hoping they might meet the eye of "mother," "wife" or "sweet-heart" who might have the care of some poor wounded one: Let the handkerchief be *large*; tie the sling in the usual way, and *then pull out the fold, until it extends from the elbow to the hand*, supporting both, as in a cradle. AUNT SUE.

An Incident—A Genuine "Lady."

A correspondent of the Presbyterian, relates at some length an incident he observed on the cars, while on his way East to Pittsburg. We condense the substance for the *American Agriculturist*. Our lady readers will not need to have the moral appended. On one seat was a pale soldier, lean and weak, returning, as it proved, from service in Arkansas, to be nursed by his mother, near Pittsburg, whose only son he was. At Wellsville, most of the passengers got out for refreshments. Some passengers carried food along, and ate it in the cars, but none offered any thing to the soldier, who, either too weak to walk, or not having money to spare, sat still, silent and alone. As the train was about starting, two middle aged ladies came in, and opening a basket began to eat a bountiful lunch. From their conversation they appeared to be from New-England. They were richly dressed, and judging them to be aristocratic, the writer was not favorably impressed with them. After a little while, one of them casting her eye forward saw the soldier. She stopped eating, and whispering a moment to her companion, who nodded assent, she went forward and conversed pleasantly with the soldier, and returned for her basket from which she supplied him liberally with the best it contained. After eating all he desired she wrapped in a paper and gave him enough to last him home. After eating the remnants in the basket herself, she sat down by his side and talked pleasantly with him most of the way to Pittsburg. The writer conceived there were few dry eyes among those who saw what passed. Was not that woman one of the true aristocracy? Whether the needed food, or the kind manner and conversation of the lady was most refreshing to the long-time homeless patriot, or whether both were not equally so, we leave the reader to decide.

Brown Bread.

Mrs. Henry Green, Saratoga Co., N. Y., sends the following which she thinks will be found superior to any thing yet published in the *American Agriculturist*. (We know that a very similar preparation *is* good.): Mix 3 pints of sour milk or buttermilk, ½ cup molasses, 1 tablespoonful salt, 1 tablespoonful soda or saleratus, 5 cups of wheat or rye flour, and 5 cups of Indian meal. Put it in a pan, about 3 inches deep, and bake three hours in an oven heated as for wheat bread.

Salting Down Meat.

"Whistler at the Plow," sends to the *American Agriculturist*, his method of salting meat, which he considers much preferable to the common practice of putting it into a brine or pickle at first. A bench is prepared with one side lower than the other, inclining say 25° to 30° from a level. The meat is cut into pieces to suit convenience, fancy, or utility, and salt is thoroughly rubbed into every part of it—into all the joints, hollows, etc. It is then laid flesh side down upon the inclined bench, so that all water may drain off. The rubbing in of dry salt is repeated three or four times during ten or twelve days, after which it is laid down in pickle in the usual manner. Mr. T. claims that by this dry salting the blood and other fluids are drained off, and the permanent brine is cleaner, sweeter, and will preserve the meat longer, and in a much more palatable condition. [We can scarcely decide upon the value of this plan. In cool weather, or in a cool room, it would work. The meat would be apt to spoil if exposed long in warm air.—ED.]

Hints About Cooking, etc.

Dressing for Turkeys, etc.—Contributed to the *American Agriculturist* by Mrs. "J. N. P., Keokuk, Iowa. Take stale white bread, crumble it fine, and moisten with boiling milk. Add about 2 ounces of butter to a pound of bread, the yolks of two hard-boiled eggs, a little parsley, and half a lemon peel, all chopped fine; season with pepper, salt, and sweet marjoram. Mix altogether with two beaten eggs. A little flour and water mixed with the dripping, if not too fat, will make good gravy. The above stuffing will be found to answer admirably for roast chicken, veal and lamb.

Puff Pudding.—Contributed to the *American Agriculturist* by "Charley Clover," Elizabeth, N. J. Take three eggs, nine tablespoonfuls of flour, a pint of milk, and salt to taste. Pour the milk on the flour scalding hot, then add the eggs. Bake from twenty minutes to half an hour. Serve with sauce to suit the taste.

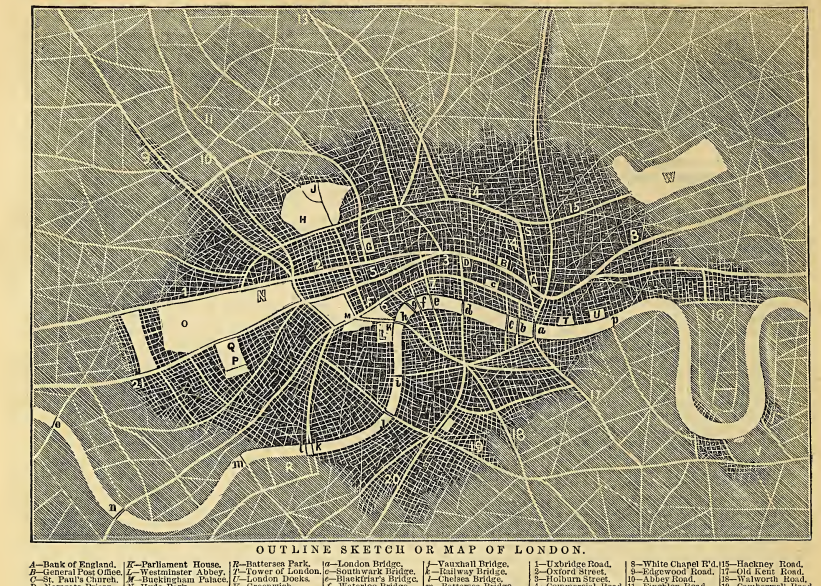
Green Tomato Pickle (Sweet).—Contributed to the *American Agriculturist*, by "E. E. J.," Lisbon, Va. This pickle is very popular with us Virginians, and is thought to be particularly nice with muttou and beef, or any kind of fresh meat. Gather full-grown green tomatoes, scald and peel them. Make a strong ginger tea, into which drop your fruit and scald well. For every two pounds of tomatoes, take a pound of sugar and a pint of good vinegar, and make a syrup of this, and drop in the fruit. Let them cook until perfectly clear. Add cinnamon, mace, and white ginger. Cover well with syrup, and tie up closely.

Good Apple Sauce.—Contributed to the *American Agriculturist*, by Viola Homespun. "Peel, quarter and core as many apples as you wish to cook; put them in a tin or brass vessel with just water enough to cook them tender. While they are cooking, have a tin cup or some other small vessel on the fire, with about half a pint of water, one tablespoonful of butter, one of sugar, about ¼ of a nutmeg grated, with this rub, stir in enough paste (thickening) to make it of the consistency of cream; put your apples in a dish and pour this over them, and if you are fond of apple sauce you can't help liking this."

Meat Pickle or Brine.—A Michigan subscriber sends to the *American Agriculturist* the following which he recommends as good: To each gallon of water add 1¾ lbs. coarse salt; 1 pint molasses, or 1 lb. brown sugar; 1 ounce saltpeter, and 1 teaspoonful of saleratus. Bring it to a boil, skimming thoroughly just before it begins to boil. Let it cool, and then pour it over the meat until entirely covered.

Preserving Hams.—A subscriber (A. Miller,) objects to smoking hams to preserve them, and recommends in its stead, a coating of pepper and flour—1 pound of the pepper and 3 lbs. of flour, well mixed together dry, to 500 lbs. of meat. Rub thoroughly on the flesh side, and also where the leg is severed from the ham. He affirms that this will keep insects from the meat, and obviates the strong taste resulting from smoking, besides being more easily and cheaply done. [The pepper may keep off insects, but most persons like the smoky flavor, and the smoke acts as a prescrvative. Salt toughens meat; and when hams are smoked, less salt will be required.—ED. *Agriculturist*.]

To Preserve Lamp Chimneys.—One who claims to have thoroughly tested it, recommends to toughen glass lamp chimneys, by putting them in lukewarm water, heating the water to boiling, and then cooling slowly.—All glass-ware is, or should be, baked in an oven and slowly cooled when first made (called "annealing"). If this were neglected, the above operation may be beneficial. We suggest, however, that the annealing will be best done, and be more lasting, and continuous, if always before putting out the lamp, the wick be turned down gradually, so that the chimney will cool off somewhat slowly.—*American Agriculturist*.



OUTLINE SKETCH OR MAP OF LONDON.

A—Bank of England.
B—General Post Office.
C—St. Paul's Church.
D—Newgate Prison.
E—British Museum.
F—Regent's Park.
J—Zoological Garden.
K—Parliament House.
L—Westminster Abbey.
M—Buckingham Palace.
N—Hyde Park.
O—Kensington Park.
P—World's Fair of 1862.
Q—Royal Hort. Garden.
R—Battersea Park.
T—Tower of London.
U—London Docks.
V—Greenwich.
W—Victoria Park.
16—West India Docks across this point.
9—London Bridge.
c—Southwark Bridge.
e—Blackfriar's Bridge.
f—Waterloo Bridge.
g—Hungerford Bridge.
i—Westminster Bridge.
l—Lambeth Bridge.
j—Vauxhall Bridge.
k—Railway Bridge.
l—Chelsea Bridge.
m—Battersea Bridge.
n—Putney Bridge.
o—Hammersmith Bridge.
p—Thames Tunnel.
1—Uxbridge Road.
3—Oxford Street.
4—Holburn Street.
5—Commercial Road.
7—Piccadilly Street.
8—Strand (Street.)
9—Fleet Street.
8—White Chapel R'd.
9—Edgewood Road.
10—Abbey Road.
11—Finchley Road.
12—Hampstead Road.
13—Highgate Street.
14—Old City Road.
15—Hackney Road.
17—Old Kent Road.
18—Walworth Road.
19—Camberwell Road.
20—Clapham Road.
21—Kensington Road, leading to KewGarden.

The Editor with his Young Readers.

LETTERS FROM MR. JUDD....NO. III.*

LONDON, *England, July 9th*, 1862.

DEAR YOUNG READERS:—I have sent you a letter to-day, but while everything is fresh in mind, I will write you a little about this, the largest city in the World. London has nearly three million inhabitants, or about three times as many as dwell in New-York City proper, though New-York would be almost as large should it stretch out its arms, as London has, and absorb the cities and villages joining it—Brooklyn, Jersey City, Newark, Hoboken, Hudson City, etc. Indeed there are nearly as many houses in a circle 12 miles from the center of New-York, as in the same circle drawn around the center of London. For 23 days I have visited the surrounding country, and the public places travelers usually visit, while in the evenings I have often spent many hours going through the streets, and lanes, into the public places, the beer saloons, the shops, etc., to see what the common people were about, what they talked about, etc., and how they spent their leisure hours. Indeed, I feel better acquainted with London than with New-York, for I am seldom in New-York at night when the masses are not at work.

Herewith is a rough outline Map of London, that I have hastily sketched to give you an idea of the City, or the location of the principal points of interest. The sketch embraces 12 miles from West to East, and 8 miles from North to South. The dark shade shows the thickly settled portion, which extends 7 to 8 miles west to east, and about 5 miles nortl. to south. The large white spots represent the great parks. The largest white line shows the Thames river (pronounced "*Tems*" here) coming in from the West, winding through the city, and bending in a sharp curve south to Greenwich. After leaving the city it runs away southeast, some 60 miles, to the sea. Most of the city is on the north side of the river. The larger white lines (1, 2, 3, 4, etc.,) represent the leading thoroughfares; the small lines give some idea of the great number of short streets running in almost every direction.

The reference letters and figures under the map will tell you the location of the many places you have read or heard of, such as Bank of England (*A*); Post Office (*B*); St. Paul's (*C*); Tower of London (*T*); Thames Tunnel (*p*); British Museum (*G*); Parliament Houses, on the river (*K*); Buckingham Palace, the Queen's City residence (*M*); The Great Exhibition (*P*); Hyde Park (*N*), Kensington Park and Gardens (*O*); Regent's Park (*H*); Zoological Gardens (*J*); Victoria Park (*W*); the London Docks (*U*); Greenwich with its Observatory whence longitude is reckoned (*V*); etc. Please study the references, and preserve this map to look at as I describe some of these places more particularly hereafter.

The Streets of London are very irregular. There are no Broadways or long Avenues, as in New-York. The long white lines I have drawn for *thoroughfares*, are not crooked enough and do not turn as short corners as do the streets, and they do not vary enough in width. Take, for example, the longest thoroughfare from east to west (1, 2, 3, 8). This is really made up of about twenty streets running mainly east and west, the end of one meeting the end of the next. Thus at fig. 1 it is called Uxbridge Road; further west it is called Kensington Terrace, then Notting Hil. High Street; further east (at fig. 2) it is Oxford st., then New Oxford, then High Holborn (at fig. 3), then Holborn, then Holborn Hill; then it turns sharply to the southeast and takes the name of Skinner st., then Newgate, then Cheapside, then Poultry st.; from the Bank (*A*) eastward it is Cornhill st., next Leadenhall st., then Aldgate, and so on eastward through White Chapel High st., White Chapel Road (at fig. 8), Mile End Road, Bow Road, etc. This thoroughfare changes its width and direction so often that you would be puzzled at first to follow it through the city from the west to the east side. The same is the case with all the other thoroughfares, which for convenience we have represented by larger white lines.——There are a great many streets of the same name—a dozen or more King streets, for example. To indicate *which* street is meant, they use two names. The city is also divided into Postal districts, C, W C, E C, W, N W, N, N E, E, S, etc., meaning the Central, West Central, East Central, Western, North western, etc. My letters come directed to "No. 11 Upper Kings street, Bloomsbury, London, W C." This tells the postman that he will find me on that one of the Upper King streets which is near Bloomsbury Square, and is in the Western Central (W C,) division of the city. If it was "No. 11 King's Street, Cheapside, London, C.," he would go to the Central (C) portion of the city, and find that one of the King streets nearest to or running out of Cheapside st. You will often see London advertisements, or business cards, where the location is described by two names, the first the street, and the second indicating what other street or place it is near. *Old London* only occupied a small space along the river from *p* to *g*. Many little villages sprung up in the suburbs, such as Pimlico, Brompton, and Chelsea, on the southwest; Kensington, Hammersmith etc., on the west; Kilburn and Hampstead on the northwest; Somers, Camden, Kenfish, Holloway, Isling ton and Highbury, on the north; Haxton, Kingsland, Dalston, and Hackney on the northeast; Globetown, Old ford, Bromly, Limehouse and Poplar, on the east; and Southwark, Rotherhi, and others, south of the river. All these were within the country covered by our map. Each of these towns had its own streets, and when they were all absorbed into London, the streets of the *same name* were necessarily distinguished, as above described.——Some of the names sound oddly to Americans. Here are a few Post Office addresses, I gather from the first pages of a directory: "Amen Corner st., Paternoster Row,"—"Angel Alley street, Bishopgate-without,"—"Bear Yard, Lincoln inn Fields" (this happens to be the *lawyers'* quarters)—"Black Bull Yard, by Peter's Lane, near St. John st."—"Black Raven Court, Seething Lane,"—"Cain Place East, Nags Head Tavern"—"Boar's Head Court, Bolt in tun Tap Tavern," etc. These are the actual business Post Office addresses of individuals, and I could give you a hundred others equally curious. Mr. Spurgeon's Church, for example, is on "Newington Butt's street, near the Elephant and Castle Tavern." (This is in South London, near where several thoroughfares meet, two-thirds of a mile south of Blackfriar's Bridge, *th*,

* Though the writer has returned, we continue these letters just as prepared abroad, at the time of their date.

London is not a neat appearing city, either in its streets or buildings. The smoke from the *three million tuns* of bituminous coal burned every year, and the almost constant fogs, fill the air, soil everything, and give the whole city a dingy look. I have seen the sun but a few times here. It has been foggy or rainy nearly every day. On what promised to be a fair day I went to the top of St. Paul's (*£*), but after waiting for hours, was unable to see beyond a few squares. The people are so accustomed to this kind of atmosphere that they think nothing of it. I have but once ventured far from my rooms without an umbrella and rubbers, and then got thoroughly soaked.

There are here no large hotels like the Astor House, St. Nicholas, and Metropolitan, of New-York. The hotels, such as they are, are kept on the European plan, that is, you pay for your room, for servants, and for whatever you call for, and no more. At the restaurants you call for what you want, and pay for the items, the meat, the bread, the butter, the potatoes, etc., and then pay the waiter separately. Most travelers stopping here a week or so, take what are termed "Lodgings," or "apartments." Thus: I have a neat furnished parlor and bedroom (by chance in a very good and kind family), for which I pay about $5 a week. This includes rooms, and care of them, and the *cooking* of my breakfast. I order from day to day what I desire, naming the items, and my hostess procures them for me, and charges me just the cost of each item. One can live as cheaply or as expensively as he desires. The dinner and supper are usually taken at restaurants, wherever one happens to be when hungry. This is the way most visitors live while in London—they in fact "keep house," and have a home for the time being.

Having now given you a general idea of London as a whole, I will briefly describe some noteworthy objects.—There are more than fifty of these in and around the city, but I can allude to but few in this and another letter. Don't forget to study their location now by the map and index underneath, and to preserve the map to read with the closing part of this letter another month. You will thus get some idea of London, whether you ever visit it or not. The city contains as many people, as each of several entire kingdoms in other parts of the world, and therefore deserves as much study.

The Thames is an important river for so small a stream. Along through the city it is scarcely more than 30 to 40 rods across—in some places less. It is spanned by twelve or thirteen bridges, some on stone arches, two on iron arches, and four or five suspended on wires, or iron bars. The most famous is London Bridge, the one next lowest down stream. It is 54 feet wide, 928 feet long between the tops of the banks, and has 5 great arches. No masted vessels go above this bridge. Small steamers ply above, loading and receiving passengers at the various piers. These are provided with jointed smoke pipes which are let down (tipped back) on approaching a bridge. Barges, and boats with short masts to be lowered, go up the stream, but there are not half so many boats on the river as I expected to see, from the descriptions given by travelers.

Large docks come up the Thames below the bridges. Artificial Basins or "Docks," are built inland, with short canals opening into the river, and provided with gates. At high tide the ships are floated into the docks, and the gates are then shut, to retain the water as the tide falls. The ships therefore lie right among the storehouses to unload and load, and go out at high tide. Some of the docks or basins are very large. By this means the narrow river accommodates a very great amount of shipping. It is a Channel, or sort of Ship Canal, from the docks out to the sea.

(*To be continued.*)

Fowl Proceeding—A Question for Discussion.

MR. B. and Mr. P. entered into partnership under the following circumstances: Mr. P. had a setting hen, and Mr. B. had eggs, which were to be placed under the hen, and the profits divided equally. But alas, "the best laid plans of mice and *hen* gang aft agiee": The chickens didn't come out exactly as looked for, as appears by the following letter from Mr. P.:

DEAR B.—I regret to inform you that our eggspectations regarding the Bramah chickens are frustrated. The old hen was manifestly averse to entering into the fruition of others' labors—or else was eggshausted by the fruitless hen!eavor to incubate on an empty nest for two or three weeks prior to the arrival of our partnership. Well—it was too eggsacting a requirement of the poor hen in such hot weather. She deserted her nest—we replaced her time and time again. She grew more and more averse to being forced into maternity. At last we shut her into the nest, and when we went again, there she was "a settin' standing." Now what to do with the eggs? Is it your understanding that the partition of profits begins with the setting of the hen? or only with the hatching of the chickens? If the former, I will defer to you in the choice of your half of the eggs. If the latter, I have no claim, except for storage, say $1. Under the eggsisting circumstances, I confess myself chicken-hearted, and beg that you will not again seduce me into any such fowl proceedings. Yours in misfortune, P.

NOW MR. B. says two things are to be considered in a settlement. 1st. He has lost his eggs. 2d. Mr. P. has lost the time of his hen. But, as she was represented to be a good setter, he thinks it a plain case of obtaining goods under false pretences.—The whole case has been referred to us for arbitration, and we submit it to the jury of our readers for home consideration.

A Hint to the Boys and Girls.

Many of our enterprising club gatherers have enlisted for the war, and there will be in many places a fine opportunity for the Boys or Girls, who have hitherto been crowded out by older competitors. Suppose you look over the General and Special Premiums on this page, and one last one. There are some Good Maps you want at once. Then, there are Good Books; a Clothes-Wringer, or Washing Machine, or Sewing Machine for mother; a Barometer for yourselves; Melodeons, Cyclopedias, fine Back Volumes of the *Agriculturist*, the Portfolio File, to keep your numbers in, Paints, etc. Hundreds and hundreds of boys, and girls too, have got one or more of these premiums in previous years. Who will get them this year? *Answer:* Those enterprising boys and girls, who are to make our go-ahead farmers, business men, good housekeepers, etc., hereafter. The extra numbers offered to *new* subscribers now, will be an inducement to them to subscribe in your club, at once.

Problems and Puzzles.

No. 18.—*New Rebus.*—A true saying. What is it?

Answer to Scriptural Rebus, No.17, (page 281, September). "Go to the ant thou sluggard, consider her ways and be wise," which is expressed thus: Goat too th e ant t house lug guard c on cider her vase and b y's.

Answer to Typographical Puzzle (page 281, September, "If the grate be empty, put coal on (:); if the grate be full, stop putting coal on. The servant's reply was, "How can I put coal on, when there is such a high fender?"

Correct answers to the puzzle in the September No., have been received from Charlie D. Bingham, "A. B. C.," Samuel Campbell, Manly L. Osborne, Charles A. White, "L. L. M., jr," H. P. Hart, H. E. Hart, A. L. Ballou, G. Frederic Sly, T. J. Craig, T. S. Peck, Wm. S. Norton, Frank, C. G. Calkins, G. A. Cunnington, John Craig.

PREMIUM LIST, For 1863---Volume XXII.

New Subscribers get the Rest of this Year Without Charge. (*See page* 320.)

Good Pay to Voluntary Agents who attend to Collecting and forwarding Clubs of Subscribers to the American Agriculturist.

(Premiums open to all who Desire them.)

Every subscriber is invited to renew his own subscription, and to solicit others to subscribe. But to all those who will take the trouble to collect and forward CLUBS of subscribers, we offer a remuneration in the form of *first-rate* articles, as named below. The pay thus offered is much larger than we could pay in cash, though no article is proposed which is not of the best quality, and fully worth the price asked. We get these articles on extra good terms *when for premiums.*)

Part of the Premium articles announced this month are selected from the best given last year, those which gave universal satisfaction. They are such as will *pay* for the effort to obtain them.

☞ WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ We offer nothing *for competition.* Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing; every one knows just what he or she is working for.

☞ *We make no distinction between new and old subscribers* in giving these premiums, but it is expected that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞ Every person collecting names for premiums, should send two copies of each list of names—one of them marked "For Premiums," and also with the name of the sender.

☞ Every person collecting names for premiums, should send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; but if designed for premiums, two copies of each list of names should be sent—one of them marked at the top "For Premiums," and also with the name of the sender.

☞ The premiums are offered for subscribers for Volume XXII (1863), *whenever received.* Canvassers will have time for completing their lists, but the premium will be paid as soon as any club is made up—if duplicate lists are sent.

☞ Any person who has commenced sending in names at 80c. and finally fails to get the higher number of names, can fall back upon the smaller number, by remitting the 20 cents extra on each of the smaller number of names required.

☞ Clubs need not be all confined to one Post Office.

Table of Premiums for 1863.

Premiums.	Price of Premium.	Names at 80 cents each.	Names at $1. each.
Names of Premium Articles.			
1—Good Books—*See terms below.*	$7 50	18	37
2—Nonpareil Washing Machine	$14 00	30	70
3—Sewing Machine, (Wheeler & Wilson)	$45 00	90	150
3—Sewing Machine, (Wilcox & Gibbs)	$35 00	69	98
4—Aneroid Barometer	$7 50	18	34
7—The Aquarius	$10 00	22	47
8—Five Octave Melodeon (best)	$75 00	150	225
9—4½ Octave Melodeon (best)	$60 00	104	192
10—Four Octave Melodeon (best)	$45 00	90	150
11—New Cyclopedia, 16 volumes	$18 00	96	140
12—Webster's *Unabridged* Dictionary	$7 50	18	35
13—Six back Volumes Agriculturist,	$5 00	16	30
14—Ditto do do do	$6 00	16	30
15—Four do do do	$4 00	13	26
16—Three do do do	$3 00	10	20
17—Two do do do	$2 00	...	15
18—One do do do	$1 12	...	10
19—Jacob's Portfolio Paper File	$1 25	...	10
20—Windsor & Newton's Paints	$2 50	...	20
21—Osborne & Hodgkinson's Paints	$1 00	...	15
23—Premium Cylinder Plow	$10 00	30	65
24—Eagle Plow No. 2	$8 00	26	58
24—Hay and Straw Cutter (best)	$8 00	26	58
25—Steel-tooth Cultivator (best)	$6 00	24	55
26—Family Lard and Wine Press	$7 00	24	55

DESCRIPTION OF THE PREMIUMS.

Premium No. 1—Good Books.

This premium will meet the wants of a great number of persons. On page 285 is a list of 36 books, many of them on topics connected with the Farm, Garden, and Household, and a portion of them the very best published. (See remarks at the head of that list.) Any person sending in 16 or more subscribers, may select any of the books in that list, (page 285,) to the amount of 12½ *cents for each name, at the club price of 80 cents, or to the amount of 25c. cents for each name, at* $1 *each.* Many farmers' clubs have, during the last year, joined together and obtained a considerable library through these premiums. N. B.—The books will be *delivered* to the recipients, (by mail or express, *free of all cost.*

No. 2—Family Clothes-Wringer.

This is a first-rate household implement—a great saver of garments, and a saver of hard work. Every woman knows that wringing by hand is not only the hardest, wrenching work of washing-day, but that the twisting by hand-wringing breaks more of the fibers of the garments than the washing and ordinary wear. With this machine set upon the edge of the wash-tub, the garments are easily and rapidly passed between two India-rubber rollers, the water falls back into the tub, and the garments dropping into a basket, in a drier condition than they can be wrung by hand, and therefore more quickly dried on the line. A child can in a few minutes bring out a tubful of clothes. The machine will save its cost several times in a year, simply in the saving of garments. We have had one of the first machines made in constant use in a family for nearly three years, and it is still as good as new. The machines now manufactured are still better, several improvements having been made. The machine offered, No. 2, is the best thing for family use. It is provided with cogs to move the rollers together, so that it is not possible to tear garments, as is the case with cheaper Wringers not provided with cogs. We present one of these No. 2 Wringers to any person procuring and forwarding 18 subscribers, at $1 each, or 37 at the lower club price, (80 cents each.)

Premium No. 3—Best Washing Machine.

Many ladies have asked us, for years past, to introduce a good Washing Machine among our Premium articles, but we have uniformly declined doing so, for want of the right kind of machine. We have now, however, found a machine worthy of a place in the premium list, in which we mean to put none but those known to be first-rate articles. The **Nonpareil Washing Machine** we have had in use in our family for nearly a year past, and it has not only driven out half-a-dozen placed there on trial, but has really given excellent satisfaction. It is the only machine, out of twenty we have tried, which the "help" cheerfully use without compulsion. It is a labor-saver and a clothes-saver—two important considerations. (See description, and advertisement on page 319.) The clothes are put in, in quantity, and quickly washed by simply turning a crank. The balance-wheel adjusts the force required, so as to make the turning easy. Take it all in all, it is the best Washing Machine we know of and is worthy of a place in every family. They are of three sizes; we select No. 2, as the best size for common family use. The price of No. 2 is $14. This machine we will present to any one forwarding 30 subscribers at the regular price, ($1 each,) or 70 subscribers at the lowest club price, (80 cents.) The machine can be sent to any point as freight, or by express, and will be forwarded, rec of all expense, except the freight after leaving the city

Premium No. 4—Sewing Machine.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person sending them to *Wheeler & Wilson's* best **$45 Sewing Machine,** (including **Hemmer**), new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly *five years'* use in our own family, in connection with other machines. We want no better. The fact that more of the Wheeler & Wilson machines are sold than of all others combined, is perhaps the best testimony in their favor. The terms on which it is offered above, will enable many families to secure one without direct outlay of money. The Premium Machines will be selected new at the manufactory, and will be forwarded, well boxed, with full directions for setting up and using, and with no expense, except for freight, after leaving the city.

Premium No. 5—Sewing Machine.

69 Subscribers at $1 each, (or **98** at 80 cents each,) will entitle the person procuring them to a *Grover & Gibbs'* **$35 Sewing Machine,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with one thread,) and has several points superior to other machines. It is neat, well made, simple in its operation; and having tested one in our own family for more than two years, we think highly of it, and can recommend it to those who can not afford to buy the higher priced double-thread machines. Some of our neighbors think this machine ahead of all others. Premium 5 will be selected and sent the same as No. 4.

Premium No. 6—Barometer.

19 Subscribers at $1 each, (or **44** at 80 cents each,) will entitle the person getting up the club to one of *Kendall's* **Ancoid Barometers,** (figured on page 313.) This neat, portable Instrument, and valuable to every person as a weather guide, as well as for scientific purposes. We have had one in use for nearly three years, and find it not only accurate, but an admirable weather prophet. Scarcely a rain storm or gale of wind has occurred, that has not been heralded by our barometer. It will save to the farmer and others many times its cost, as a weather-indicator. These instruments resemble a large watch, 5 inches in diameter, and 2 inches thick. Each one is in a neat leather case, and when sent to a distance, this is packed in cotton, in a wooden box 4½ by 8 inches, and can go anywhere, by express or otherwise, with perfect safety.

Premium No. 7—The Aquarius.

This is a capital instrument, valuable to have in every house. It is a portable hand force-pump, which any one can catch up at a moment's warning, and throw from a pail or other vessel a steady stream of water upon a fire in a house, or elsewhere. It is supplied with both a jet-pipe and a rose, or sprinkler, and can be used for washing windows, carriages, &c.; for sprinkling trees, plants, destroying insects, &c., &c. With it, it is easy to wash the second and third story windows, and to sprinkle water upon the roof, while standing upon the ground. Such an apparatus will often enable a person to so use a bucket or two of water as to extinguish a fire breaking out where it could not be reached with water dashed on from pails. It is supplied with suction and injection India-rubber pipes, and with air-chambers to keep up a constant stream. The weight is 8 lbs., and it can be sent anywhere as freight, or by express. We substitute this for the Hydropult, as being cheaper, and quite as good. (Price $10.) We will present an **Aquarius** complete to any one forwarding a club of 22 subscribers at $1 each, (or 27 at 80 cents each.) N.B.—Further particulars can be obtained by sending for a descriptive circular to the manufacturers, W. & B. Douglas, Middletown, Conn.

Premium No. 8—Melodeon.

125 Subscribers at $1 each, (or **237** at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$75 Melodeons** (5 octaves.) These Melodeons are of very superior tone and finish. We have ourselves used one for three years past, and it has given but little trouble in addition, and is now as good as when we have heard it, as one of the very best. The different priced instruments are of equally good tone—the price varying with the size and style of finish. The size, prices, etc., of these instruments can be learned particularly, by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive catalogue. The instruments given as Premiums, will be sent new directly from the factory at Buffalo, ready boxed, and without expense to the recipient, except for freight. Schools and churches will find it to their efforts and to secure one of these instruments. This has been frequently done. See "N. B," under Premium No. **10.**

Premium No. 9—Melodeon.

104 Subscribers at $1 each, (or **182** at 80 cents each) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$60 Melodeons** (4½ octaves.) See No. 8 above.

Premium No. 10—Melodeon.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$45 Melodeons** (4 octaves.) See remarks above. **N. B.**—Higher or lower priced Melodeons will be given for larger lists, in the same proportion.

Premium No. 11—New Cyclopedia—A Splendid and Very Valuable Work.

96 Subscribers at $1 each, (or **140** at 80 cents each,) will entitle the person getting up the club to a set of *Appleton's* **New American Cyclopedia,** now in course of publication, consisting of *sixteen large volumes* of about **770** *pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge.* Fourteen volumes are now ready, and the remaining two will be furnished as soon as issued. We recommend it to every one, whether they procure it as a premium or not. The work is sold at $3 per volume, or $48 for the set. To no better purpose could any one devote the Winter evening than in raising a club of subscribers to secure this for himself and family. Several schools have secured it, through the combined efforts of the scholars in raising clubs of subscribers. Boys have also secured it by their individual efforts.

Premium No. 12—Best Dictionary.

18 Subscribers at $1 each, (or **40** at 80 cts. each,) will entitle the person getting up the club to one of the *large Pictorial Unabridged Edition of* **Worcester's Dictionary,** (Price $7.50.) This now stands confessedly the most valuable standard dictionary published. The size of the book is **12** inches long, **10** inches wide, nearly **4** inches thick, and contains **1854 pages** of 3 columns each, giving the spelling, pronunciation, and full explanation of the terms of every word in the English Language, and as a source of general information on all subjects, stands next to the Cyclopedia. The Dictionary can be called for at our Office, or be sent by Express or otherwise, to any part of the country.

Premiums Nos. 13 to 18—Back Volumes—A First-rate Library.

These premiums (13 to 18,) will enable any one to secure the previous excellent volumes of the *American Agriculturist*, as far back as Volume XVI. We have stereotype plates and can print any number desired of the English Volumes, 16, 17, 18, 19, 20, and 21, and of the German Volumes 18, 19, 20, and 21. These will be sent in clean, new numbers, each volume by itself, with index complete, and be forwarded *postpaid.* The whole five can be taken together, or one or more copies of any particular volume be selected, as desired. They will be presented as in the table above, viz.: For **20** Subscribers at $1 each, (or 36 at 80 cents each,) we will present **six volumes.** For **16** Subscribers at $1 each, (or **30** at 80 cents each,) we will present **five volumes.**—For **13** Subscribers at $1 each, (or **25** at 80 cents each,) **four volumes.**—For **10** Subscribers at $1 each, (or **20** at 80 cents each,) **three volumes.**—For **7** Subscribers at 80 cents each, **two volumes.**—For **10** Subscribers at 80 cents each, **one volume.**—Let every one selecting these premiums be careful to name just *which* back volumes are desired.

Premium No. 19—Best File for Agriculturist.

Jacobs' Portfolio File, made just to fit the *Agriculturist*, with gilded name on back, a leather cover or portfolio, so arranged that successive numbers of the paper can be inserted in a minute, and be properly preserved in book form for reference. When one volume is complete the sheets can be removed and stitched, and a new volume inserted. A single cover will answer for a dozen successive volumes, and will last a lifetime. Has not yet made. Price is $1, and the postage 23 cents. We will forward it, postpaid, to any one sending *eleven* subscribers, at the lowest club price, (83 cents each.)

Premium No. 20—Paints.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Windsor & Newton's* **Water Color Paints**—consisting of 12 colors, put up in a neat mahogany box, with pallettes, etc. These paints are imported from London, and are by all considered the best in the world. They are adapted to the finest work, or they will make a good and appropriate present to any of our younger readers. They will be sent post-paid any where in the United States within 3000 miles.

Premium No. 21—Paints.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an Assortment of *Scott & Hodgkinson's* **Water Color Paints,** consisting of 24 colors or shades, put up in a neat case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, will answer for ordinary practice by children or beginners, and for common sketching. Sent same as No. 20.

Premiums Nos. 22 to 26.

We have not space left to describe these particularly, this month. The following list now stands as published in this journal last year. It is undoubtedly a great improvement. The Eagle Plow is well Known, and so is the Hay and Straw Cutter, and the Steel-toothed Cultivator, one of the most useful implements on the farm. The Lard and Wine Press is a very convenient household implement, for pressing out lard or tallow, the juice of grapes, currants, berries, &c. For the prices, and subscribers required, see the table above.

Reports on Crops, September 10, 1862.

(See General Remarks and Reports on Special Crops on page 296.)

SPECIAL EXPLANATIONS TO THE READER FOR SEPTEMBER. (Full details are given on the Blank Forms furnished to Reporters.)

The First Column gives the Counties from which the reports come. In many cases the territory reported upon extends over adjacent counties, and the figures apply to a larger territory than the county named, but sometimes to single townships only.

The Second Column gives the number of persons in each county or locality, the average of whose opinions are embraced in the single rows of figures, standing opposite in the same line. In several cases a whole County is represented by an officer of the Agricultural Society, who gives the summary of reports from assistants in each of the towns. ∞ indicates that a large but indefinite number of persons joined in making the report.

The Third Column gives the names of the persons who received and distributed blanks, and collected and returned the reports.

☞ *All the reports the same as a 10 unless taken as the standard for comparison*, thus :

Column A—10 means that the weather for a month previous to the date of the report was about as good as the average for other years, that is for growing crops and for general farm operations. Figures above or below **10** indicate the comparative propitiousness or unfavorableness of the weather.

Columns—B—E—in these 10 indicates that the amount of *crop harvested* is about the same as *last year*. Each figure (or unit) above **10** means a tenth more of *crop*, and each unit below **10**, means one-tenth less. Thus, **5** means one-half of average *crop*—**15** means one and a half—**20** means double, and so on.

Columns D—G—M—O—This month the figures indicate the average yield per acre in bushels.

Column H—10 indicates that the surface of corn growing is the same as in 1861.

Columns—I—S—In these **10** indicates that the surface of corn and potatoes growing is the same as the average for five years past.

Column R—10 indicates that the wants of the district are just supplied. Figures above and below indicate the surplus or deficiency.

Columns C—F—L—N—P—in these columns 10 means that the average *crop gathered* is about the same as the average for five years past. Each unit above or below **10** stands for an increase or decrease of one-tenth in the *crop*.

Columns K—T—U—V—In these columns **10** means that the *condition* and *prospect* at the date of Report, indicated an *average yield per acre*. Here also each unit above or below ten indicates the prospect of a yield a tenth above or below the average; thus, a half crop is indicated by **5**—a double crop by **20**. Some report fruit prospects at **100** to **150**, meaning that the promise is for ten to fifteen times the average.

Registered No.	*County and number of persons reporting from each.*	*Persons gathering and sending the reports.*	*Winter Wheat.* Weather.	*Winter Wheat.* Spr'g Wheat.	*Winter Wheat.* Winter Wheat.	*Corn.*	*Rye*	*Oats.*	*Hay.*	*Pot. Crop.*	*Fruit.*
			Crop as ave.	Crop as ave.	Crop as ave.	Crop as ave.	Crop as ave.	Crop as ave.	Crop as ave.	Crop as ave.	Apples.
			Blanks per acre.	Blanks per acre.	Blanks per acre.	Blanks per acre.	Blanks per acre.	Blanks per acre.	Blanks per acre.	Prospect of date.	Peaches
			Surface in 1861.	Surface in 1861.	Surface in 1861.	Surface in 1861.	Surface in 1861.	Surface in 1861.	Surface in 1861.		
			Crop as ave.	Crop as ave.	Crop as ave.	Crop as ave.	Crop as ave.	Crop as ave.	Crop as ave.	Crop as ave.	Fruit.
			Average weight.	Average weight.	Average weight.	Average weight.	Average weight.	Average weight.	Average weight.		
			A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	R	S	T	U	V
	OHIO.																					
1	Washington	A. J. Hart.	10	20	15	29				10	12	10	15	10	5	4	10	12	10	18	100	100
2	Auglaize	Samuel Craig.	10	13	13	18				10	11	9	14	8	8	9	10	10	8	15	100	100
3	Miami	Enoch Jones.	10	11	11	20				10	11	9	14	8	8	10	9	10	8	13	80	80
4	Trumbull	L. P. Andrews.	10	20	15	29				10	12	10	15	10	5	4	10	12	10	18	100	100
5	Huron	D. Lybarger.	11	13	12	19	11	12	9	10	14	12	15	10	10	8	10	11	9	10	15	16
6	Crawford	D. Robertson, jr.	10	10	...	12	34	17	3	10	13	8	...	...	10	8	10	16	10	10	14	15
7	Ashtabula	J. W. Kennedy.	10	15	10	15	14	13	12	15	10	15	20	15	20	15	10	10	12	14	...	...
8	Licking	G. W. Penny.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	Portage	H. Snooner.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	Stark	Jacob Holl.	8	15	10	15	30	20	4	10	10	5	...	...	9	7	11	12	10	6	5	13
11	Pickaway	A. N. Goodin.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	Jackson	D. Muckley.	6	12	15	30	...	...	...	12	15	12	10	12	7	7	10	15	12	18	50	25
13	Delaware	Joel Myers.	10	12	11	20	...	...	...	10	12	10	15	10	10	7	8	10	10	15	100	100
14	Fairfield	Thomas Cole.	10	12	12	20	...	...	...	9	11	10	...	15	10	15	12	10	7	20	50	...
15	Wayne	J. D. Sears.	8	10	13	15	12	12	10	10	12	10	15	10	10	8	10	12	10	15	30	30
16	Portage	Hower Mills.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	Ashland	H. M. Close.	9	12	14	19	14	15	12	10	12	8	10	10	7	5	5	10	13	10	12	35
18	Erie	J. Brown.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	Cuyahoga	D. G. Rawson.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20	Washington	H. C. Hayward.	7	16	16	30	...	...	...	5	10	5	...	...	7	5	5	10	10	8	10	25
21	Morgan	W. m. Milhons.	6	12	14	20	5	5	15	10	10	6	...	...	10	10	10	12	8	5	6	20
22	Jefferson	D. D. Mikach.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	Portage	A. S. Plummer.	7	16	11	15	10	10	2	10	10	4	18	12	10	15	13	...	12	5	6	30
24	Monroe	W. Hukeler.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25	Ashtabula	C. G. Calkins.	15	15	10	10	12	15	8	10	10	8	...	...	10	9	10	8	8	8	10	15
26	Belmont	Ed. Sellers.	10	10	10	15	30	...	5	10	10	8	15	22	10	10	10	10	10	10	10	25
27	Belmont	Slater Brown.	8	10	9	15	30	...	5	10	10	8	15	22	24	5	13	14	10	8	10	20
28	Butler	John Youmans.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29	Greene	J. Clay Cox.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30	Licking & Fk's	James Strang.	8	15	15	25	9	4	11	13	12	10	16	15	4	...	15	15	10	15	50	60
31	Richland	R. S. McFarland.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Fayette	H. M. Day.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
33	Butler	John M. Millikin.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
34	Miami	L. K. Fretz.	10	11	12	18	...	...	...	10	10	12	...	...	9	6	12	10	10	8	50	50
35	Union	Dr. H. F. Munn.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
36	Wood	M. H. Fennell.	10	10	10	25	12	...	...	6	4	8	...	...	8	5	10	10	10	10	50	50
37	Pickaway	John Courtright.	8	15	12	16	...	...	...	10	10	11	10	10	10	8	10	12	10	9	40	25
38	Columbiana	D. W. C. Longshore	9	10	16	12	15	8	9	11	4	10	10	10	35	11	11	9	6	6	7	7
39	Lorain	J. B. Lang.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Reg	County	No.	Chief Reporters.	Wr	Wint'r Wheat			Spring Wheat			Corn.			Rye.		Oat.		Hay		Pot-atos		Fruit. Ap Ph	
				A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	R	S	T	U	V
	INDIANA.																						
51	Benton	..	D. Campbell	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
52	Jay	1	Peter Walter	15	11	11	12	..	..	..	21	13	8	..	..	10	2	12	20	10	8	12	999
53	Hendricks	..	A. Whitenack	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
54	Knox	..	Joel Wampler	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55	Randolph	16	C. G. Puckett	11	10	13	12	..	..	..	10	10	15	..	..	10	4	10	12	10	12	18	20
56	Henry	..	T. B. Redding	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
57	Henry	1	Jebu Allen	13	11	14	11	..	..	..	12	13	13	..	..	4	3	14	14	10	10	12	12
58	Sullivan	..	Murray Briggs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
59	Hendricks	..	Jacob Bader	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
60	Marshall	1	Fred. Hoover	8	13	15	10	..	..	..	12	15	8	..	..	10	15	10	8	10	5	12	100
61	Ripley	1	E. Saltmarsb	11	11	12	11	..	..	..	10	10	10	10	..	6	15	13	14	10	10	8	3
62	Henry	..	P. P. Rifner	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
63	Vermillion	4	S. Grondyke	10	12	15	15	..	..	..	11	13	16	12	..	6	..	12	15	..	..	15	20
64	Hendricks	1	A. Furnas	12	10	11	15	..	..	..	10	10	11	10	12	8	4	10	13	8	13	12	5
65	Ripley	..	John Bennett	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
66	Newton	..	Elam G. Smith	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
67	Grant	5	Wm. Thomas, jr.	10	11	15	15	..	..	..	12	13	8	..	..	10	6	12	30	13	12	12	40
68	Switzerland	..	W. H. Stow	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
69	Green	5	Wm. Hovis	10	8	10	10	..	..	..	10	11	5	11	15	2	5	15	8	11	5	8	20
70	Adams	..	P. N. Collins	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
71	Adams	..	John McConnel	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
72	Ripley	1	John Bennett	9	12	13	11	..	..	..	9	10	10	12	10	8	8	13	12	10	10	10	10
73	Elkhart	..	D. S. Kersliner	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
76	Warwick	..	John T. Fleming	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
77	Johnson	..	Hurricane F's As	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
78	Jay	1	W. J. Hesser	10	12	14	14	..	..	..	10	12	12	8	7	11	15	13	12	11	12	15	50
79	Decatur	1	John W. Smith	10	20	15	15	..	..	..	10	11	10	..	..	..	..	15	15	10	11	10	..
80	Vermillion	1	John Davis	10	10	10	11	8	10	10	11	12	12	15	12	8	8	12	12	20	10	10	10
81	Morgan	..	C. S. Hilbourn	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
82	Vigo	..	James M. Lyons	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
83	Randolph	11	L. M. Reeves	10	12	13	15	..	..	..	10	10	10	10	10	7	5	13	15	15	10	20	30
84	Hamilton	..	Andrew F. Evans	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
85	Marion	..	L. W. Ritter	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
86	Howard	1	Wm. S. Wooton	9	10	..	12	..	..	..	10	..	8	..	..	7	15	11	10	10	9	15	50
87	Dubois	1	B. R. Kemp	8	12	15	10	..	..	..	10	12	8	10	10	2	2	15	15	10	8	8	7
88	Vermillion	..	James M. Lyons	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	ILLINOIS.																						
101	McDonough	..	Nelson Abbott	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
102	Coles	..	C. Boles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
103	Saline	5	James M. Eaton	9	..	12	15	..	..	..	11	12	11	..	20	15	15	18	5	12	13	12	20
104	Jersey	1	J. M. Bacon	8	10	10	25	..	..	..	10	10	8	..	..	3	20	12	..	10	8	6	6
105	Jasper	1	Henry Griffing	12	15	15	18	..	..	..	10	13	8	12	10	8	..	15	18	10	8	10	6
106	Pike	..	Thos. Odiorne	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
107	Vermilion	1	H. C. Smith	10	12	10	2	7	7	12	10	12	8	..	..	8	25	10	12	10	10	10	10
108	Richland	1	H. A. Hunt	10	13	25	14	..	..	..	10	15	8	..	..	..	..	20	..	12	5	5	5
109	St. Clair	1	Edw. Flanagan	12	15	20	26	..	..	..	8	7	15	..	..	6	20	15	15	10	15	10	10
110	Marion	..	E. L. Merritt	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
111	DeKalb	1	C. W. Branch	10	10	10	18	11	11	8	7	9	10	..	..	10	50	10	12	..	4	10	..
112	Macoupin	1	Harry Grundy	10	13	12	16	1	1	7	9	9	10	..	..	1	10	14	..	..	8	10	14
113	Cumberland	..	J. E. Mumford	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
114	Putn'm & Mar'll	1	C. C. Hoagland	10	3	8	20	10	10	8	12	10	12	5	16	15	45	10	15	10	14	10	..
115	Woodford	..	James Freeman	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
116	Ogle	..	John Sharp	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
117	Vermillion	1	William Bowman	12	18	15	18	..	..	..	8	10	10	12	15	7	20	11	10	10	10	15	80
118	Kankakee	..	Democrat Office	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
119	Kendall	..	H. S. Hills	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
120	Crawford	1	Erastus Logan	15	15	20	20	..	..	..	10	12	18	..	30	10	12	30	..	12	15	5	8
121	Douglass	..	Caleb Bates	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
122	Mason	..	J. B. Wright	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
123	Douglass	..	I. J. Halsted	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
124	Warren	..	A. H. Tracy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
125	Mason	5	R. S. Lybarger	15	10	7	4	7	6	20	10	9	15	7	15	15	15	..	..	9	8	10	80
126	Marshall	..	W. H. Webbers	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
127	Washington	1	J. A. Bent	..	12	15	22	..	..	..	8	9	8	15	15	9	..	15	10	12	10	15	10
128	DeKalb	1	N. F. Graves	5	11	10	10	11	10	4	13	11	9	8	8	9	9	11	10	10	4	10	..
	WIS.																						
151	Sauk	16	Abijah Sweet	10	10	20	20	20	50	10	10	30	20	..	..	20	20	10	20	10	20	20	..
152	Dodge	..	D. L. Bancroft	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
153	Fond du Lac	10	E. Reynolds	12	..	..	..	11	14	12	10	10	10	..	..	9	30	13	12	10	11	11	..
154	Walworth	..	Geo. Cross	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
155	Green Lake	4	C. S. Whittier	14	..	..	..	11	11	12	10	9	8	..	..	9	25	12	10	10	10	6	..
156	Jackson	..	C. T. Gansel	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
157	Dane	4	I. A. Kierstead	8	..	..	..	9	11	6	10	11	10	..	..	10	30	14	13	11	8	5	..
158	Trempleau	..	F. W Newland	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
159	Grant	5	J. A. Curtis	10	10	5	13	4	4	5	11	13	8	10	15	12	40	20	13	10	10	5	..
160	Adams	..	S. W. Pierce	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
161	Badax	..	J. A. Somerly	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
162	Fond du Lac	6	Rev. A. A. Horton	11	..	..	..	10	11	11	9	10	8	..	..	10	9	10	12	11	10	9	..
163	Monroe	..	G. M. Robinson	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
164	Ray	..	O. D. Hawkins	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
165	Brown	10	————	10	..	..	..	15	20	10	7	20	10	10	10	20	10	30	10	15	10	5	..
166	La Fayette	1	J. C. March	..	..	..	..	3	..	3	9	..	9	..	..	..	11	..	..	..	10	5	..
167	Grant	9	Thos. Pendleton	10	..	..	..	5	6	10	10	17	10	..	..	11	50	13	10	10	10	..	..
168	Grant	..	S. D. Watkins	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
169	Oconto	1	D. B. Newton	10	8	12	9	12	16	10	10	11	10	..	..	15	10	10	10	10	8	..	..
171	Rock	1	H. D. Root	10	50	8	12	11	12	8	10	10	11	15	12	12	30	11	12	10	11	12	..
	IOWA.																						
201	Jackson	..	H. Stephens	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
202	Clinton	..	C. W. Hatch	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
203	Cedar	..	J. A. Macy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
204	Fayette	1	H. C. Wood	10	..	..	..	11	..	14	10	..	10	..	..	9	35	..	..	..	10	..	..
205	Ringgold	..	I. S. Beall	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
206	Delaware	..	J. L. McCreery	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
207	Powshiek	1	Erastus Snow	10	10	30	12	9	50	12	18	..	12	30	15	..	40	..	15	20	15	15	..
208	Marion	..	B. C. Bellamy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
209	Cedar	..	J. C. Alexander	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
210	Madison	..	J. Carman	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
211	Scott	..	T. F. C. Schmidt	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
212	Buchanan	..	H. C. Heminway	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
213	Howard	1	C. A. Marshall	9	..	..	..	12	30	12	18	25	14	..	..	30	40	12	11	12	12	..	..
214	Lucas	1	M. Moorhead	10	10	11	12	9	12	8	12	14	11	12	12	12	10	11	9	10	10	..	..
215	Page	..	S. H. Kridelbaugh	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
216	Linn	1	F. H. Williams	10	..	..	..	..	..	3	11	13	12	..	..	10	6	15	10	11	12	10	..
217	Clayton	..	Wm. A. Peufield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
218	Madison	m	Josiah Carmean	10	8	10	10	8	10	5	12	12	12	5	12	15	10	20	1	10	10	..	..
219	Scott	1	J. F. C. Schmidt	..	..	..	..	11	15	6	11	14	13	..	..	10	9	..	..	10	10	11	..
220	Wayne	..	J. S. Whittaker	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
221	Delaware	..	J. C. Skinner	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
222	Jones	1	Isaac Willard	9	12	12	15	11	12	8	11	12	12	..	..	9	40	12	15	9	7	12	..
223	Linn	..	H. C. Raymond	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
224	Dallas	..	H. E. Belden	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
225	Howard	..	H. W. Partch	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	MINN.																						
251	Hennepin	1	Jonas H. Howe	8	11	20	15	11	18	10	15	10	15	3	10	15	10	..	..	10	12	..	..
252	Fillmore	..	A. Gould	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
253	Dodge	1	T. G. Patch	14	..	..	..	15	40	25	12	20	14	..	..	20	60	30	10	15	10	..	..
254	Olmstead	..	R. H. Talbot	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
255	Winona	..	S. R. Crittenden	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
256	Sibley	..	J. U. Green	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
257	Nicollet	..	Wm. H. Sigler	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
258	Fillmore	6	A. Hitchcock	10	..	..	..	13	30	18	14	30	13	..	..	40	..	..	..	12	10	..	..
259	Olmsted	1	A. Smith	9	..	..	..	10	12	15	12	14	15	10	18	13	35	..	..	12	10	..	..
260	Wabasha	..	Wm. McLeoud	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
261	Blue Earth	..	James Miller	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	MO.																						
300	Maries	9	W. I. Meeder	8	9	10	10	11	10	10	10	12	10	10	10	9	8	10	10	10	10	10	9
301	Mississippi	10	Geo. Whitcomb	12	7	12	12	..	..	..	5	7	15	..	..	5	5	5	15	5	10	20	15
302	Franklin	..	Charles E. Ross	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	KY.																						
326	Spencer	1	Milton McGrew	8	10	11	11	..	..	..	8	10	7	6	9	9	6	12	15	10	8	6	7
	MICH.																						
351	St. Joseph	1	O. W. Beall	10	10	10	15	..	..	..	10	10	13	..	..	10	25	13	..	11	6	10	20
352	Berrien	1	A. Bennett	10	11	10	14	..	..	..	12	10	12	..	..	12	25	11	..	10	12	2	4
354	Jackson	m	L. D. Watkins	10	12	12	18	..	..	..	8	9	10	..	..	10	40	15	12	10	12	15	20
355	Sanilac	..	C. Waterbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
356	Calhoun	4	C. M. Keep	10	9	10	18	..	..	..	10	11	10	..	..	8	25	12	11	9	9	10	200
357	Clinton	10	John Watling	10	20	10	10	15	40	2	10	50	10	10	10	12	2	50	..	20	10	20	..
358	Lenawee	1	Rufus Baker	10	11	11	5	..	..	..	10	10	11	..	..	10	10	10	13	9	8	10	80
359	Ionia	1	D. T. Lawrence	..	..	..	..	..	..	..	11	12	10	..	..	..	..	..	..	12	10	7	12
362	Gratiot	1	S. S. Hastings	12	12	15	18	10	12	15	13	16	20	5	..	15	30	10	10	15	15	..	..
	N. Y.																						
401	Chautauqua	..	John J. Phelps	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
402	Orleans	20	Peter Ferris	12	11	15	16	6	10	7	8	8	10	..	..	8	35	8	..	10	10	10	15
403	Lewis	1	John F. Bates	10	..	..	..	9	10	10	..	..	..	..	..	10	8	7	7	10	10	10	..
404	Wyoming	1	Linus De Wolfe	12	15	8	16	12	10	16	10	10	5	..	..	10	30	6	..	8	10	20	50
405	St. Lawrence	1	J. S. Wallace	12	..	..	..	12	13	14	12	14	8	7	10	12	30	7	9	7	8	10	..
406	Delaware	..	Levi Miles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
407	Niagara	..	J. Q. Adams	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
408	Suffolk	1	G. E. Woodruff	8	10	10	..	5	8	..	12	10	8	10	..	13	50	12	..	15	8	12	10
409	Fulton	..	Geo. W. Heaton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
410	Niagara	1	A. E. Raymond	11	15	40	20	7	15	15	12	10	10	..	..	10	30	8	..	15	10	8	50
411	Oswego	..	D. Farling	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
412	Chenango	1	H. T. Richmond	10	12	18	15	..	..	..	10	10	8	10	15	10	30	12	10	10	12	100	..
413	Otsego	1	H. T. Richmond	10	12	18	15	..	..	..	10	10	8	10	15	10	30	12	10	10	12	100	..
414	Wayne	1	A. M. Richardson	12	11	13	12	15	20	7	10	10	8	1	14	10	8	10	10	8	7	20	50
415	Cayuga	..	B. W. Thompson	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
416	Chautauqua	1	H. A. Whittemore	12	10	10	15	13	15	8	15	10	12	..	..	20	20	10	..	12	12	20	20
417	Ontario	..	E. A. McKay	13	13	16	12	8	6	10	13	12	12	8	10	11	..	13	13	15	13	15	18
418	Saratoga	1	J. C. Rouse	12	11	12	10	12	12	12	12	12	12	10	10	12	12	10	9	12	15	12	..
419	Onondaga	..	D. G. Newell	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
420	Queens	m	Farmer's Club	1	10	10	11	..	..	..	10	10	12	13	12	10	10	12	12	9	8	15	..
421	Essex	1	Jos. E. Smith	8	15	15	12	10	5	5	10	10	7	10	12	10	35	8	..	10	15	30	..
422	Suffolk	..	Watson Wilson	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
423	Wyoming	1	D. T. Griffin	12	7	8	13	8	11	9	..	..	9	..	..	10	9	11	10	9	10	11	..
424	Westchester	..	James Wood	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
425	Allegany	1	J. H. Weaver	..	..	..	..	9	8	7	7	8	10	..	..	10	9	10	12	10	12	15	..
426	Broome	..	Cephas Benedict	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
427	Suffolk	..	John Henderson	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
428	Allegany	..	Daniel H. Cobb	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
429	Broome	20	C. H. Treadwell	10	10	9	12	10	11	12	12	12	9	9	12	10	28	11	13	10	10	80	60
430	Broome	1	R. Hogg, Sec. F.C.	11	10	7	16	11	13	15	9	12	10	4	20	12	30	11	13	11	11	7	..
431	Niagara	m	E. S. Holmes	10	13	20	11	20	23	8	6	8	11	..	..	8	12	9	10	5	9	15	15
432	Ulster	..	J. B. Brooks	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
433	Suffolk	1	Albert A. Mott	7	10	12	10	10	10	10	10	10	10	10	8	10	7	10	..	10	9	15	20
	PENN.																						
451	Franklin	..	John F. Clayton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
452	Franklin	6	Jas. H. Clayton	20	12	11	20	..	..	..	11	10	9	6	25	5	15	10	15	10	9	20	10
453	Bradford	1	E. B. Barns	12	12	10	8	9	8	9	10	11	7	10	10	9	..	11	10	10	..	6	80
454	Snyder	1	F. Weirick	..	..	..	..	..	..	..	10	..	8	..	..	10	8	10	10	10	10	12	7
455	Franklin	1	O. S. Brown	7	10	15	20	..	..	..	10	10	7	10	15	8	15	10	20	10	7	15	10
456	Fayette	..	F. Oglevee	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
457	Dauphin	..	D. Brightbill	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
458	Franklin	..	J. Sharpe Nixon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
459	Perry	6	Alex. Kauffman	7	13	20	19	..	..	..	10	11	10	5	20	12	25	10	12	12	10	15	12
460	Montgomery	..	J. C. Boorse	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
461	Lancaster	1	Cyrus Brinton	..	10	11	7	..	..	..	10	11	10	..	..	9	5	10	11	12	9	50	50
462	Lancaster	1	Jacob M. Seitz	8	10	..	25	..	..	..	10	..	10	..	..	..	..	12	12	10	12	50	50
463	Cambria	..	John Lloyd	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
464	Fulton	25	John Hoke	..	..	15	15	..	..	..	10	10	5	10	8	10	8	10	15	10	10	30	30
465	Delaware	..	Chas. G. Ogden	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
466	Franklin	..	O. H. Anderson	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
467	Blair	2	S. B. Replogle	..	11	12	12	..	..	..	10	11	8	10	10	7	6	12	12	10	9	12	12
468	Centre	1	D. G. Klein	8	10	10	12	..	..	..	10	10	8	10	12	10	5	10	10	10	10	80	80
469	Butler	1	Finley Balph	5	12	14	15	20	40	5	10	12	8	8	15	10	25	10	10	10	8	15	20
470	Montgomery	5	A. Zimmerman	8	10	10	14	..	..	..	10	10	8	10	10	10	8	10	15	..	10	20	..
471	Susquehanna	5	G. B. Slack	8	30	20	10	10	40	10	10	15	7	8	10	12	50	10	10	8	20	5	..
472	Fayette	1	Jas. Robinson	2	15	10	15	5	5	5	10	10	5	6	5	8	5	10	10	10	5	8	1
473	Washington	1	John Post	8	10	10	15	..	..	..	12	10	10	5	..	15	20	20	..	15	15	20	20
474	Lancaster	..	H. Musselman	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
475	Columbia	1	A. P. Young	10	11	13	18	..	..	..	9	10	9	8	12	10	22	10	..	10	11	12	30
476	York	6	J. P. Harman	5	7	9	8	..	..	..	10	13	8	7	8	5	5	15	14	13	7	6	5
477	Washington	..	Jos. M. Cleery	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
478	Chester	1	A. V. Trimble	8	12	12	20	..	..	..	10	10	8	10	20	8	35	10	10	9	12	20	40
479	Bedford	2	D. C. Long	8	10	12	18	..	..	..	10	12	12	8	10	10	8	10	10	10	14	10	14
480	Lancaster	1	A. P. McIlvain	7	11	10	8	..	..	..	9	10	11	..	..	10	9	..	..	10	9	30	20
481	Indiana	11	J. M. McGaughey	14	10	14	20	11	12	11	14	14	12	10	10	11	9	10	10	12	10	30	50
482	Luzerne	10	P. Sutton	9	10	11	10	10	12	8	9	10	8	10	11	10	8	10	9	11	12	12	100
483	Cumberland	..	John B. Hoover	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
484	Armstrong	..	J. McClymond	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
485	Venango	12	A. C Balliet	7	11	14	10	12	20	15	10	15	5	10	20	20	30	20	12	30	60	60	80
486	Susquehanna	3	M. Birchard	12	11	9	13	10	8	10	10	12	7	..	..	12	25	9	10	10	8	10	..
487	Huntingdon	5	A. B. Brumbaugh	7	12	12	19	..	..	..	11	12	8	7	16	7	14	10	10	9	7	9	10
488	Alleghany	..	R. L. Walker	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	N. J.																						
501	Cape May	..	J. G. Leach	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
502	Mercer	..	S. P. Nicholson	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
503	Somerset	16	A. Fleming	10	10	10	13	..	..	..	10	10	7	10	16	7	5	10	11	10	12	80	50
504	Hunterdon	..	D. J. Blackwell	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
505	Mercer	1	Ira J. Blackwell	10	15	15	15	..	..	..	10	10	8	10	10	9	35	10	10	11	9	15	20
506	Middlesex	1	J. G. Shultz	12	10	15	13	..	..	..	13	13	12	8	13	10	13	10	10	8	12	15	50
507	Mercer	5	C. M. Norton	8	..	..	..	..	..	..	10	10	8	..	..	..	..	..	..	15	12	25	30
508	Warren	1	C. O. Harris	9	13	10	15	30	20	5	10	12	7	10	15	10	20	12	12	10	10	30	30
509	Hunterdon	..	A. L. Melick	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
510	Camden	1	J. S. Coles	8	..	..	10	..	..	..	11	12	6	..	10	..	10	..	10	12	8	10	10
	DEL.																						
551	Kent	..	T. B. Coursey	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
552	Kent	..	M. Hayes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
554	New Castle	..	C. Churchman, jr.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
555	New Castle	1	D. B. Higgings	6	13	15	7	..	..	..	9	8	7	..	..	7	5	11	11	10	9	30	9
	VA.																						
576	Wood	9	E. Meldahl	10	12	10	8	..	..	..	10	10	10	..	..	13	3	10	13	15	10	8	10
577	Wood	..	J. E. Wharton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	MAINE.																						
601	Waldo	1	Geo. E. Brackett	12	..	..	..	9	8	15	10	12	10	9	..	10	25	15	..	15	12	20	..
602	Kennebec	1	R. M. Manson	8	..	..	..	11	14	25	11	12	10	11	33	10	38	11	..	10	10	14	..
605	Franklin	1	Dr. O. W. True	10	..	..	..	14	15	..	8	10	7	..	..	10	..	10	9	12	10	8	..
	N. H.																						
626	Cheshire	1	Geo. H. Gilbert	10	10	10	25	10	10	25	10	11	11	10	15	9	35	12	12	10	10	13	..
627	Merrimac	..	J. W. Simonds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
628	Carroll	1	Joseph Spinney	8	..	..	..	11	12	8	11	12	9	..	..	11	12	10	10	12	10	30	..
	VT.																						
651	Bennington	5	Allen Benson	..	..	..	..	7	8	..	12	13	11	10	..	12	..	14	12	11	9	15	..
652	Orange	..	J. R. Cleaveland	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
653	Orange	72	Rufus Brown	12	..	..	..	12	11	15	10	10	10	10	18	10	25	12	13	10	12	20	..
654	Caledonia	..	J. Lawrence	12	..	..	..	10	14	21	9	11	9	11	18	12	28	5	..	14	13	50	..
655	Chittenden	..	W. H. Kingsbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
656	Franklin	1	E. R. Towle	8	..	..	..	10	11	20	10	10	8	..	..	13	40	7	..	10	12	20	..
657	Windham	..	A. Pettee	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
658	Lamoille	..	S. Howard, jr.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	MASS.																						
676	Berkshire	17	S. S. Jeune	12	..	..	..	12	12	10	10	11	15	11	15	10	11	12	15	12	12	12	..
677	Plymouth	..	Charles A. Wood	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	CONN.																						
701	New London	..	W. H. Starr	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
702	New-Haven	1	E. Phelps	..	..	..	..	..	..	..	..	10	10	10	11	10	10	12	12	11	10	2	15
706	New-London	..	J. P. Barstow	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
708	New-London	1	T. A. Chapman	12	..	..	..	..	..	..	10	10	10	12	10	8	..	11	..	10	15	15	30
709	Windham	9	F. S. Luther	9	..	..	..	..	..	..	10	11	10	8	11	10	11	10	12	8	7	13	..
	R. I.																						
726	Newport	1	J. E. Macomber	10	..	..	..	..	..	..	12	13	12	10	17	12	40	10	12	12	10	9	..
	KANSAS.																						
752	Shawnee	12	Wm. F. Johnston	7	40	8	15	2	5	5	7	10	5	10	15	..	..	..	..	20	4	..	30
754	Wyandotte	5	W. W. Dickinson	10	20	50	22	2	15	8	10	25	14	10	15	20	20	..	..	20	8	4	5
	COL'RADO.																						
776	———	1	Wm. N. Byers	10	30	..	15	50	..	15	20	..	20	..	..	30	20	..	..	20	15	10	..
	NEBRAS'A																						
801	Platte	1	H. J. Hudson	10	..	..	..	15	14	12	10	10	30	..	..	10	7	..	..	10	15	..	..
802	Nehema	..	Thos. R. Fisher	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	CALIF'A.		For Aug.																				
825	St. Barbara	4	C. T. Dennis	10	..	..	..	12	10	10	11	10	11	..	..	10	10	15	15	12	20	20	15
	UTAH.																						
851	Gr't Salt Lake	4	Thomas Bullock	9	8	9	8	10	12	7	12	12	9	..	..	10	10	4	9	9	11	15	12
				A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	R	S	T	U	V
	Average for the whole Country			9.8	12.5	13.9	14.3	12.8	17.0	10.1	10.4	11.2	9.9	9.7	13.8	10.9	17.3	12.0	13.5	11.[illegible]	10.4	16.3	23.[illegible]

Business Notices.

☞ *Eighty Cents a Line of space.*

DELAWARE GRAPE VINES

At Ten Cents Each.

PARSONS & CO.

FLUSHING, N. Y.

Offer these vines in excellent health, at the following low rates:

1st quality, $25 per 100—$200 per 1000.
2d quality, $15 per 100—$100 per 1000.

GRAPE VINES.

Unusual inducements offered to Fall purchasers.
Send for a Price List. J. KNOX,
Box 155, Pittsburgh, Pa.

Market Review, Prices, etc.

AMERICAN AGRICULTURIST OFFICE.
New-York, Friday, Sept. 19, 1862.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
26 days *this* m'th	421,000	4,478,000	2,541,000	91,000	43,000	910,000
26 days *last* m'th	481,000	3,270,000	2,510,000	132,000	53,000	437,000

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley*
26 days *this* month,	513,000	5,482,000	3,065,000	104,500	——
26 days *last* month	576,000	5,430,000	2,980,000	118,000	——

2. *Comparison with same time last year.*

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
26 days 1862	421,000	4,478,000	2,541,000	91,000	43,000	910,000
27 days 1861	479,000	3,401,000	3,605,000	45,150	65,925	398,969

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
26 days 1862	513,000	5,482,000	3,065,000	104,500	——
27 days 1861	533,812	5,473,125	4,439,250	47,137	6,300

3. *Exports from New-York, from Jan.* 1 *to Sept.* 17.

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862	2,254,504	15,398,811	8,640,113	1,031,646	22,138	66,837
1861	1,862,150	15,316,257	7,986,653	398,763	1,000	145,282
1860	1,054,276	5,258,544	2,074,114	1000	8,280	101,224

4. *Exports of Breadstuffs from the United States to Great Britain and Ireland, annually, for Sixteen years, ending September* 1:

	Flour, bbls.	Wheat, bushels.	Corn, bushels.
1862	2,672,515	25,754,709	14,084,168
1861	2,561,661	25,553,370	11,705,034
1860	717,156	4,938,714	2,221,857
1859	106,457	439,010	342,013
1858	1,295,430	6,555,643	3,317,802
1857	849,600	7,479,401	4,746,278
1856	1,641,265	7,956,406	6,731,161
855	175,209	324,427	6,679,138
854	1,846,920	6,038,003	6,049,371
1853	1,600,449	4,823,519	1,425,278
1852	1,427,442	2,728,442	1,487,398
1851	1,559,584	1,496,355	2,205,601
1850	574,757	461,276	4,753,358
1849	1,137,556	1,140,194	12,685,260
1848	182,583	241,300	4,390,226
1847	3,155,645	4,000,359	17,157,659
Grand total for 16 years.	21,504,429	99,931,137	99,981,602

5. *Exports from the United States to the Continent of Europe, for a series of eight years, ending Sept.* 1:

	Flour, bbls.	Wheat, bushels.	Corn, bush.	Rye, bush.
1862	626,672	7,617,472	322,074	1,612,926
1861	142,129	3,452,496	101,145	347,258
1860	49,243	178,031	19,358	——
1859	51,388	57,845	25,519	——
1858	303,100	390,428	16,848	13,100
1857	483,344	2,675,853	543,590	216,162
1856	748,408	2,610,079	282,083	1,975,178
1855	7,763	4,972	308,428	35,569
Total for 8 years.	2,412,047	17,186,976	1,619,045	4,200,193

6. *Exports from Canada to Great Britain and Ireland, via. St. Lawrence, from Sept.* 1, 1861, *to Sept.* 1, 1862.

Flour, bbls.617,308; Wheat, bus.6,376,905; Corn, bushels, 2,016,040; Peas, bush...822,060; Oats, bush..780,756: Oat Meal, bbls...2,242.

7. *Receipts of Breadstuffs at Chicago, Jan.* 1, *to Sept.* 15.

	1861.	1862.
Flour, bbls	924,788	1,081,005
Wheat, bushels	9,900,457	8,579,123
Corn, bushels	19,869,293	22,062,476
Oats, bushels	1,088,694	2,174,397
Rye, bushels	291,498	724,912
Barley, bushels	350,028	496,083

8. *Shipments from Chicago, from Jan.* 1, *to Sept.* 15.

	1861.	1862.
Flour, bbls	943,658	9,765,364
Wheat, bushels	9,233,335	8,916,271
Corn, bushels	16,770,379	20,101,154
Oats, bushels	4,429,777	1,955,397
Rye, bushels	264,048	594,534
Barley, bushels	144,135	188,414

9. *Stock of Breadstuffs in Store at Chicago, Sept.* 15, '62.

Flour, bbls	20,000
Wheat, bushels	483,278
Corn, bushels	2,508,851

10. *Receipts of Breadstuffs at the head of tide-water at Albany, by the Erie and other New York Canals, from the commencement of navigation to and including the* 14th *of September in the years indicated:*

	1860.	1861.	1862.
Canals opened—	April 25.	May 1.	May 1.
Flour, bbls	466,310	688,522	885,777
Wheat, bush	7,050,891	14,673,402	17,866,154
Corn	10,901,897	12,212,721	12,669,674
Barley	95,612	210,624	403,267
Oats	3,978,695	3,153,774	2,719,223
Rye	149,375	419,397	528,280

CURRENT WHOLESALE PRICES.

	Aug. 19.	Sept. 18.
FLOUR—Super to Extra State	$4 95 @ 5 40	$5 10 @ 5 70
Superfine Western	4 95 @ 5 10	5 05 @ 5 25
Extra Western	5 25 @ 7 00	5 45 @ 7 00
Fancy to Extra Genesee	5 45 @ 7 00	5 65 @ 7 00
Super. to Extra Southern	5 30 @ 7 25	5 55 @ 7 25
RYE FLOUR—Fine and Super.	3 00 @ 4 30	3 10 @ 4 40
CORN MEAL	3 45 @ 3 75	3 50 @ 3 75
WHEAT—Canada White	1 37 @ 1 50	1 40 @ 1 48
Western White	1 37 @ 1 55	1 37 @ 1 53
All kinds of Red	1 11 @ 1 40	1 08 @ 1 31
CORN—Yellow	64 @ 66	62 @ 65
White	70 @ 75	65 @ 75
Mixed	54 @ 62	54 @ 60
OATS—Western	48 @ 51	52 @ 58
State	51 @ 52	55 @ 60
RYE	76 @ 83	75 @ 83
BARLEY	None selling.	None selling.
HAY, in bales, per 100 lbs	65 @ 75	60 @ 75
COTTON—Middlings, per lb	46 @ 47	56 @ 57
RICE, per 100 lbs	6 50 @ 8 50	6 50 @ 8 75
HOPS, crop of 1862, per lb	15 @ 21	14 @ 18
FEATHERS, Live Geese, p. lb	40 @ 42	42 @
SEED—Clover, per lb	8 @ 8½	Nominal.
Timothy, per bushel	1 87 @ 2 00	Nominal.
SUGAR—Brown, per lb	7½@ 10¼	8 @ 10¾
MOLASSES, New-Orleans, p.gl.	33 @ 42	35 @ 45
COFFEE, Rio, per lb	21¼@ 23	21 @ 22½
TOBACCO—Kentucky, &c, p.lb.	9 @ 20	11 @ 25
Seed Leaf, per lb	9 @ 30	12 @ 32½
WOOL—Domestic fleece, p. lb.	45 @ 60	55 @ 70
Domestic, pulled, per lb	35 @ 53	48 @ 65
TALLOW, per lb	10½@ 10¾	10½@ 10¾
OIL CAKE, per tun	33 50 @41 00	33 00 @40 00
PORK—Mess, per bbl	11 37½@11 50	11 37½@11 50
Prime, per bbl	10 00 @	10 00 @10 12½
BEEF—Plain mess	13 75 @14 00	13 50 @14 00
LARD, in bbls., per lb	8¾@ 9¾	9 @ 9⅞
BUTTER—Western, per lb	9 @ 15	12 @ 16
State, per lb	10 @ 18	15 @ 20
CHEESE	5½@ 8½	7 @ 9½
Broom Corn—per lb	5 @ 7	5 @ 7
EGGS—Fresh, per dozen	10 @ 11	15 @ 16
Western, per doz	9 @ 10	14 @ 15
POULTRY—Fowls, per lb	10 @	10 @ 12
Ducks, per pair	38 @ 50	75 @ 1 25
Geese, per pair	1 00 @ 1 25	1 12 @ 1 37
Turkeys, per lb	11 @ 12	12 @ 14
POTATOES—Dykemans, p. bbl	1 13 @ 1 25	1 25 @ 1 50
Buckeyes, per bbl	1 25 @ 1 50	1 25 @ 1 50
Peach Blow, per bbl		1 75 @ 1 88
Mercers, per bbl	1 50 @ 2 00	1 75 @ 2 00
Sweet Delawares, per bbl	6 50 @	3 00 @ 3 50
ONIONS, Red, per bbl	1 75 @ 2 00	1 25 @ 1 38
TURNIPS—Rutabagas, p. bbl.	50 @ 75	75 @
Marrow Squashes, per bbl	87 @ 1 25	75 @ 87
TOMATOES, per bush	20 @ 25	15 @ 25
GREEN CORN, per 100	37 @ 50	31 @ 50
APPLES, good, p.bbl.	1 25 @ 1 75	1 50 @ 1 75
Apples, common, per bbl	75 @ 1 00	1 00 @ 1 25
PEACHES, choice, per basket.	87 @ 1 25	75 @ 1 00
Peaches, common, per basket		50 @ 62
PLUMS, Green Gage, per bush		1 50 @ 2 00
Plums, blue, per bushel		1 50 @ 1 75
Plums, common, per bushel		75 @ 1 00
PEARS, cooking, per bbl	1 25 @ 1 50	75 @ 1 00
Pears, Bartlett, per bbl		3 00 @ 3 50
WATERMELONS, per 100	25 00 @30 00	5 00 @15 00
MUSKMELONS, per bbl		50 @ 1 00

We have carefully prepared, from our own records, and from official and other reliable sources, the foregoing series of very important tables. These indicate a remarkable increase in the Breadstuff trade of the country, which (now that Cotton has lost the supremacy) is the greatest interest of our republic, in a commercial point of view. Those tables suggest many reflections, some of which are referred to in an editorial article on page 296. They are so arranged as to make clear the wonderful prosperity of this branch of our commerce, and elaborate comment is unnecessary. The shipments of the Cereal Year closing on the 1st inst., were heavy, and in excess of any previous season. To these may be added the exports to South America, West Indies, British Provinces, etc., which for the last year amounted to 1,135,014 bbls. Flour, 158,192 bbls. Corn meal, 12,087 bushels Wheat, 502,576 bushels Corn. The importance of so good a foreign demand *at fair, remunerative prices*, with the abundant crop of the last season, can hardly be estimated, particularly in the present unsettled state of the country. We are again blessed with a good crop, and have much to spare, while European harvests are now indisputably deficient. In Flour the transactions of the month have been heavy; the supplies are moderate, particularly of that of sound quality; prices change a trifle from day to day with the value of exchange and gold, holders at the close being firm for good brands. The transactions in Wheat continue very extensive and are controlled in a great measure by the same causes that affect Flour. The late rise in English freights has checked business, and the market, up to Monday last, was much depressed, but has partially recovered within a few days, and closes with an upward tendency. Corn has arrived freely and declined in value, especially unsound and inferior lots, which constitute the bulk of the present receipts. Rye has been scarce and in demand, but closes heavily, with more offering. Oats were quite plenty and unsettled; but have been recently less abundant and in lively request at advanced prices... Cotton rapidly improved in price, Middlings reaching 59c.@60c., but the market is now dull, and quotations for Middling Uplands are down to 56c.@56½c. per lb. The receipts are increasing gradually and adding, little by little, to the available supply....The inquiry for Pork and Beef has been quite moderate; while the demand for Lard, Butter and Cheese has been active .. An unusual degree of animation has been discernable in the market for Wool, especially the coarser qualities which have advanced very rapidly, and now command much more than the finer grades, on account of the requirements of the army.. ..Tobacco, too, has been unusually brisk, and in view of the unsettled state of affairs in the West, is much dearer.....Hops are coming forward freely and are lower....The movements in other articles of domestic Produce have been fair at our quotations. The table of Prices Current, to-day, and one month previous, show present rates and the changes from our last report.

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been more fully supplied during the past month than ever before, the average being 5,350 per week. The demand has been pretty active, and prices steady at ¼c. advance on former quotations up to Sept. 16th, when 6,410 cattle, the largest supply New-York has ever seen together, were thrown in for a single week and prices declined ½c.@¾c. per lb. Fears of a rebel invasion in southern Ohio, and parts of Indiana and Kentucky, caused graziers to hurry off their stock beyond the reach of danger. With such a supply, the best cattle sold at prices equivalent to 8c.@8¼c. per lb., estimated dressed weight; good steers 7c.@7½c., and poor cattle, of which there were many, at 5c.@6c., the average of all kinds being 7¼c.

Veal Calves.—Receipts have been light, averaging 489 per week. The demand improves with the approach of cold weather, and prices are ¼c. higher, or 5½c.@6c. per lb. live weight, for choice calves, 5c. for fair, and 4c. for poor grades.

Sheep and Lambs.—Receipts have been larger, averaging 13,853 per week for the past month. Prices are about the same as for the previous month, with a good demand from butchers, and an inquiry from farmers for store ewes to winter over. Good fat sheep are worth prices equivalent to 4½c. per lb., and if extra fine, 5c. per lb. live weight. Fair stock sells at 4c.@4¼c., and lambs 5c.@6c. Most of the stock sells at about $3½ per head, though some lots of heavy sheep brought $4¾.

Live Hogs have been coming forward very freely, the weekly average being 15,022. Cool weather, with a good demand for packing, has kept the stock well used up; all heavy fat hogs are selling as fast as they arrive. Prime, fat, corn-fed hogs are worth 4c.@4⅛c. per lb., live weight, and light corn-fed and still-fed are selling slowly at 3¼c.@3¾c.

The Weather has been variable, upon the whole warm and dry, though an untimely frost on Sept. 3d, injured corn, buckwheat, and the grazing lands, in some localities at the north.——OUR DAILY NOTES, condensed, read—*August* 20, 21, warm, rain wanted—22, cloudy, showers at night—23, light rain—24, 25, clear, cool—26, 27, warm, fine, shower on night of 27th—28, showers—29, 30, clear, fine—31, clear A. M., cloudy P. M., rain at night.——*September* 1, cloudy, heavy thunder shower at night—2, cool, cloudy—3 clear, cold, (44° here) frost at north—4 to 10, clear, fine Autumn weather, but getting dry—11, clear, warm, light rain at night—12, N. E. rain storm, creating a flood in some places—13, to 16, cool, and generally cloudy—17, light N. E. rain—18, 19, clear, fine days. The barometer has varied from 29.50 to 30.30 inches, which is a greater range than usual.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.)—*r* indicates rain—*s*, snow.]

AUGUST.

1.....66	8.....70	15.....70*r*	22.....69*r*	29.....66
2.....69	9.....77*r*	16.....60	23.....69*r*	30.....57
3.....70	10.....74	17.....57	24.....58	31.....58*r*
4.....73*r*	11.....67	18.....57	25.....55	—
5.....72*r*	12.....74*r*	19.....60	26.....61	Aver'ge 66°
6.....71	13.....67	20.....63	27.....68	
7.....68	14.....63	21.....64	28.....71*r*	

SEPTEMBER.

1.....70*r*	4.....54	7.....64	10.....61	13.....62
2.....58	5.....59	8.....66	11.....65	14.....56
3.....48	6.....60	9.....68	12.....69*r*	15.....59

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The law expressly says that a Periodical issued at stated periods, and not weighing over 3 ounces avoirdupois, shall be charged *one cent* per number, and only *half* this sum if paid quarterly in advance. The paper for the *Agriculturist* is purposely manufactured so that it shall weigh a little *less than three ounces* when printed; the legal postage is therefore only six cents a year, if paid quarterly in advance.

Premium Strawberry Plants Sent.

All Premium Strawberry Plants called for up to this date, (Sept. 20,) have been forwarded in good order. A circular containing a chapter of directions for culture preceded each parcel, three or four days. Any failure to receive the circular and plants, if there has been any, is chargeable to irregularity of the mails.

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Beyond all doubt or controversy, the circulation of the American Agriculturist to regular subscribers, is many thousands greater than that of any other Agricultural or Horticultural Journal in the World, no matter what its character, or time or place of issue. The publisher is ready at all times to substantiate this statement by comparing books.

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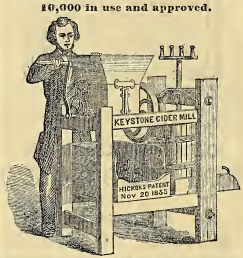

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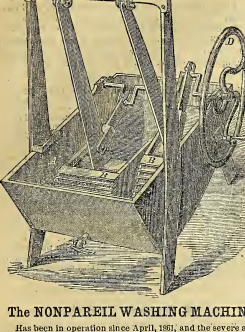

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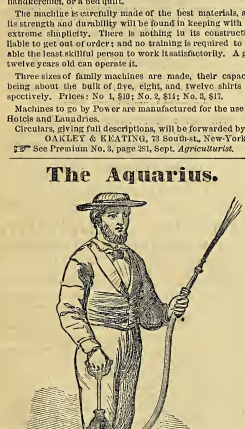

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☞ See pages 346, 349 and 353, this month.

November.

"These rules consider well, with early care
The vineyard destined for the vines prepare;
But long before the planting, dig the ground
With furrows deep, that cast a rising mound:
The clods exposed to winter winds will bake;
For putrid earth will best in vineyards take,
And hoary frosts, after the painful toil
Of delving winds, will rot the mellow soil."—VIRGIL.

There are many indications now of rapid progress in vine culture in this country. Until the present generation, the supposition has been general among all, who have bestowed a thought upon the subject, that there was something peculiar in our climate that forbade the successful cultivation of the finer varieties of grapes. Grapes that flourish in southern Europe, here needed the protection of glass to bring good clusters. In the open air they were, almost with out exception, sad failures. The cultivation of the vine goes hand in hand with a high civilization, and it is not until a people have done their pioneer work, and begin to demand luxuries, that they will be likely to succeed with the vine, whatever their soil and climate. There will be little demand for the products of the vine; and the requisite skill to manage vines, and to manufacture wine, will not be called forth. Our position hitherto has been that of a pioneer people. For two centuries we have been getting ready to live, rather than living. Our work has been the leveling of forests, the opening of farms, the building of bridges, roads, railways, ships and steamers. Our luxuries have come mainly from abroad. We have furnished the raw material—wool, hemp, cotton—and other nations have manufactured for us. We have been so intent upon the necessities of life, that we have overlooked its comforts and luxuries. We have, as a general thing, been content with the rudest and most unskilled labor, adequate only to produce coarse fare and coarse clothing.

It requires much more care and knowledge to manage a vine than a cane or cotton plant. It must have skill in its planting, in directing its growth, in thinning and harvesting the clusters, in marketing them or in making wine. It indicates a new era in a nation's history when they become vine growers. Their golden age approaches, when every man "sits under his own vine." Wild vines have always flourished upon our soil, and to an uneducated taste they are a tolerable fruit. But almost every one, after eating well ripened Catawbas, or, better still, Delawares, pronounces the wild fruit worthless. Even if the fruit were better, there are serious objections to cultivating the wild vines. They are not very productive, the berries fall early from the stem, and they do not improve by cultivation. Since the introduction of new varieties which ripen as early as the wild natives, there is nothing to be said in favor of the latter.

The Isabella and the Catawba were the pioneers among the improved varieties, and have done a great and good work in educating the taste of the people, and starting amateurs upon a career of improvement. The Diana followed, a seedling of the Catawba, an earlier and a much better grape. This has not yet been before the public twenty years. When well grown it leaves little to be desired in all the qualities of a good grape. It abounds in a fine, rich juice, vinous and aromatic, from which all the offensive native odor has disappeared. It hangs upon the vines for a long time, is not injured by frosts after it is ripe, and keeps well for winter use. It is said to make good raisins, but how extensive the experiments were upon which this opinion is founded, we are not well informed. It is exceedingly productive and very vigorous.

Within the last five years the candidates for popular favor have multiplied exceedingly, and at the exhibitions of our horticultural fairs the grapes are crowding in more and more every year. The latest and best information upon the merits of these new grapes is embodied in the reports of the American Pomological Society, especially in the reports of the State and district committees. In a compilation of these reports recently published under the auspices of the Society, it appears that the Catawba does well in twelve of the 35 districts into which the northern fruit-growing belt is divided. This belt embraces all north of the southern line of Virginia, Tennessee, and Missouri, east of the Rocky Mountains. The Concord flourishes in twenty of these districts. The Delaware in nineteen, the Isabella in fourteen, the Hartford Prolific in ten, the Clinton in nine, the Rebecca in eight, and the Diana in eighteen. It would not perhaps be fair to infer that these grapes are failures in the rest of the districts, except in the case of the Isabella and the Catawba. These have been long enough before the public for a fair trial, and it is well known that the season is too short for them north of the southern line of Massachusetts. Some of the most promising grapes are yet in the hands of amateurs, and it is quite possible that these will throw every thing we now have into the shade. We saw clusters at the recent meeting of the Pomological Society that would have done credit to hot-house cultivation; they certainly surpassed all we ever expected to see of hardy grapes, grown in this country. We think fruit-growers have every reason to persevere in their efforts to hybridize, and to originate new sorts better adapted to our climate, to plant vineyards, and to make grapes the fruit of the million. The last census throws some light upon the progress which vine culture is making among us. The increase of our population in the last decade is shown to be thirty-five per cent.; the increase of the products of the orchard, one hundred and sixty per cent.; increase of wine, seven hundred and fifty per cent. This increase is doubtless largest in the valley of the Ohio, stimulated by the example of Longworth, and his fellow laborers; but in almost every northern State attention is turned in this direction, and small vineyards are planted and made profitable. Our population is so large and the price of grapes is so high in our cities and villages, that little has yet been done at wine making, beyond the domestic manufacture. The products of the vine in this region, will be likely to be marketed in the shape of fruit for many years to come. Grapes at ten cents a pound can not be made into wine economically.

We do not apprehend the peril to the cause of temperance from vine culture which some very honestly cherish. Nor do we believe, with others, that the making of pure wine from our own prolific vineyards will have any tendency to abate the evils of drunkenness. The cure of that evil lies a little further back than the scarcity or abundance of intoxicating drinks, or the higher or lower grade of alcohol in them. The young slide into drinking habits from the want of proper food and moral influences at home. The food is coarse and heating, and without much variety. The home is without refinement and without attractions. The boy has a restless craving for what he does not find at home, seeks society, and finds bad company and advisers in places of vicious resort. A strong temptation is removed when the young have variety and the luxury of delicious fruits, intelligent society and happiness under the parental roof. We want vines for our homes, for ornament and for fruit, and it will be scores of years, with the best labors of all our amateurs and nurserymen, before good grapes in their season will be common upon the tables of all classes. Let us plant vines in larger numbers, not doubting that He who gives the clusters will give us and our children wisdom to use them rightly.

Calendar of Operations for Nov., 1862.

SUNDRY HINTS FOR THE SEASON.

Farm.

In these exciting times, and with the general deficiency of good help, that man must be a good calculator, and fortunate withal, who has been able to get his work all up with the season, so as to be ready now to calmly await the approach of winter. Most persons will doubtless find it necessary to attend to many suggestions given in the Calendar in the October *American Agriculturist*. This done, there are yet the late turnips and carrots to be gathered and stored—perhaps potatoes to be dug, corn to be husked, grain to be threshed and marketed, cattle, hogs, and poultry to be fattened, sorghum to be manufactured, leaves to be gathered in abundance for the hog pens and manure heap before they are covered by snow, fire wood to be provided, buildings to be repaired, etc., etc. Then timber should be got in seasoning for tool handles to be made during winter; and there is fencing, draining, subsoiling, and trenching or throwing up the soil in ridges to expose it to Winter's frosts.

Animals—Keep them always improving; twice or thrice as much food and time are required to bring up an animal fallen off in flesh, as will be needed to keep them in good condition; a single exposure to a cold storm is as likely to involve influenza, and general debility in a farm animal, as in the owner himself. Comfort for the animal is money in the purse of the proprietor.

Barns and Stables—Stop the rain leaks in the roof, and the cold air leaks around the stalls. That clapboard is loose or gone. That great crack under the door lets in cold, and the horse or cow must have more fuel (food) for the fire within the body to counteract the cold draft without. Pure air is essential, but let it not come in chilling currents upon man or beast. With ventilators above for the escape of bad air, there will generally be enough good air stealing in almost insensibly through the seams and crevices; if not, admit it from some point where it will not blow directly upon any human or other animal. Light is as essential to animals as to vegetables; potato vines in the dark cellar are no more bleached and injured than the animal kept in a dark stable.

Butter—Owing to the dry weather, butter will continue to command a good price *if* of fair quality and well put up. Cleanliness and thorough working out the buttermilk are the first requisites. To secure good butter, the churning should be at the temperature of 55° to 60° Fahrenheit. Bring the cream to this condition by letting it stand for sometime in a room just at this heat; or make it warmer or colder by setting the churn, or other vessel holding the cream, into warm or cold water as needed.

Cellars—Many a family has been made sick by effluvia from the cellar; the feild air from decaying vegetables, is as bad as the malaria from a swamp. Through draining, ventilation, and plenty of lime whitewash, are good, both for the things kept in the cellar, and for those living above it. A little hydraulic lime mortar, with bits of stone, are good stoppers for rat and mice holes. Just above freezing is the best cellar temperature for fruits, cabbages, and indeed for all things to be kept therein, except sweet potatoes, which need to be in the warmest, dryest part, but not in a hot place. Common potatoes endure rather more warmth than apples and other fruits; these must be kept cool. Sashes with double glass and an intervening thin space of confined air, are nearly equal to stone walls in shutting out cold. Protect the exposed walls with a bank of earth outside, or what is neater and better, spent tanbark if it be accessible.

Cisterns—Pure clean rain water is better for man and beast than any well or spring water medicated with lime and other salines dissolved out from the soil. If not already done, empty and clean foul cisterns now, when rains may be depended upon to fill them again. (See note on examining cisterns and wells, elsewhere.)

Corn—Dampness and frost combined, injure it for food, and especially for seed. Much of the corn brought to this market is sold as "unsound." The sooner it can be husked and placed in a dry room the better. The crib should never be more than 3 or 4 feet wide, and let plenty of air holes be left, by slats at the bottom and the sides. *The roof should project far over the eaves*, to prevent storms beating in upon the sides. A little cat terrier dog chained under or in the corn house is the best rat-trap we know of. If the crib be set on posts covered with tin or wide projecting tin or sheet iron caps placed on top of the posts, rats and mice will find it hard work to get in. Seed corn should have been selected from the earliest and most productive hills, husked, and kept dry. If not done, immediately select the best yet available. A shilling's care now may save the loss of an acre next season. Nice corn husks, torn in shreds, make excellent filling for beds.

Cotton—Begin picking before the seeds are fully ripe. Rain storms injure the fiber after it is matured. Some sunning is needed for that gathered early. (See basket.)

Draining—This pays, in the field, in the garden, and *around* the barn-yard to keep out washing water. A drain or two under the garden will advance the working a week or two in Spring, and make the product much better, by letting in warm air and preventing the chill produced by the evaporation of the water from the surface during Summer. The same results are produced in the field. No one who drains an acre and notes the results, will fail to drain other acres afterwards. It pays on almost all soils, even those usually considered dry. Try a little draining this month, and if it don't pay charge the result to our account—crediting us with the good done, of course. Remove the standing water, by an under-drain, from that sickly tree, and it will smile upon you with its load of blushing fruit. Run out this morning, and clear the obstructions from the dead-furrow drains in the winter grain. Frost will not kill wheat or rye; frozen water in the soil will; water in freezing expands one eighth of its bulk, and rears and heaves the roots; perfectly dry soil expands none in freezing; moist soil expands but little.

Fruit—Though plenty this year, it will pay for carefully saving. (See Fruit for Soldiers, elsewhere.) Apples should be kept as cool as possible without being touched by all by frost. Sort frequently, handling with care; one bruise rots the apple, and the disease spreads rapidly to others. Apples packed in *dry* oats, or bran, or cut straw, or leaves, and kept cool, will remain sound long after their usual time of decay.

Fuel—It takes the heat of almost one half of green or soggy wood to burn up the other half. Water in changing to vapor absorbs and conceals a thousand degrees of heat. A cord of charcoal gives out more heat in burning, than a cord of wood. A cord of thoroughly dry wood loses a thousand times less heat in the smoky vapor, than if burned when green. Therefore, get the Winter's fuel to drying out, under cover, as soon as possible. It will save fuel, time, vexation, and health, and be a mercy to the housewife.

Grain usually keeps better in the bin than in the mow or stack, especially where mice abound, and in the bin it is ever ready for market when the "signs come right." The straw can then be turned to account for feeding and bedding. Do not burn it, even in the new rich prairie regions. Let the cattle nest on it. If it can not be used, let it lie even five or ten years; there will in that time surely be some place that will be benefited by an application of well rotted vegetable matter. Clean the grain for market well. A bushel of chaff, fowl stuff, or shrunk grain in 100 bushels, will lower the price of the whole 3 to 10 cents per bushel—an important difference, and one which must pay for an extra fanning and screening. "Like produces its like." so save the best and plumpest kernels for seed. We *know* this pays by not a little experience of our own, and by that of many others.

Hedges—Thorns and other deciduous hedge plants may be set until the ground freezes.—Leave evergreens until next May.

Hogs—They fatten most on the same food when the weather is warm. The heat of all animals is sustained by the internal burning (oxydization) of the fat-producing elements. As soon as the fire goes out (in death) the flesh becomes cold. In cold weather 20 to 90 per cent. of the food, and often the whole of it, goes to keeping up the animal heat. As cold comes on, give the hogs a warm pen, or a warm nest of straw, and see them lay on fat. Increase their bulk by feeding the coarse food first, and then finish off by filling up the tissues with fat furnished abundantly by corn. For early pigs, turn in the males now. Sows run about 4 months, (109 to 123 days.)

Horses, next to man, need clean, well ventilated, well lighted quarters. The curry-comb and dry brush do more than make them look well; a clean skin promotes health. It is cruel, and bad economy, to drive a horse until he sweats, and then let him stand five minutes with a half blanket across the middle of the back. The cover should go well over the shoulders and hips, and down far enough to ward off currents of cold air from the thighs, belly, and shoulders. See page 330.

Implements—The thrifty man will not only *know* where they are, but see that they are never exposed to rusting or rotting by dews and rains. As a rule, tools are destroyed more by exposure than by use. A hint to the readers to thinking on the subject is all we have room for here. See page 335.

Ice Houses—See hints on page 297, in October *Agriculturist*. The first crop of good ice may be the only one, and should be secured.

In-Door—Does *your* wife blister her fingers trying to cut cloth with dull, loose-riveted sheers or scissors? A hammer for the rivet, and a whetstone or grindstone, or a file will brighten the edge and wife's or daughter's countenance at the same time. Then, there are the dull knives; how much arm work and vexation they make in haggling meat. Desert the talking regiment at the store or post-office some night, and fix up the housekeeping tools; do it often, and your rations will be dealt out more regularly, and in better shape. Finely cut hash (meat and potatoes) is a good, wholesome food, particularly for those who have sore teeth; but it is hard work to cut it fine with a dull chopping knife. Keep that tool sharp. Hale's meat cutter is cheap ($2½ to $4) and will cut more hash or sausage meat, in five minutes, than you can cut with knife and chopping bowl in fifty minutes, and do the work better. It will cut the meat and potatoes together.——Do you want an intelligent wife and children? Then let them read the papers, and talk *with them* about the news of the day.——The brain should be hard at work farming, while king Jack Frost has the hands tied. Study the agricultural papers and books, instead of merely reading them. In studying over a hundred pages you will be likely to hit upon a hint or two, or get a thought started that will result in a hundred dollars profit. The only money we have ever made in farming, gardening, or publishing, has resulted from plans laid while sitting in the dark, or lying in bed *thinking*. Hard work without thought may keep you from starvation; hard work with well digested plans may yield a competence. Get from books and papers all of other men's thoughts you can; it won't improve them, while enriching you.

Leaves from the Forest—Every one knows the value of black soil from the forest for fruit trees, and for the garden generally. It is equally good for field crops. This material is only the decayed leaves mixed with a little of the surface soil. It will pay to collect all the leaves accessible, for the manure heap, for the hog pen, and for the horse and cow stall. Here they will finish a good fertilizing material; or they will be a good mulch (both protection and manure) if spread on the soil around fruit trees; in the forest they may take fire and destroy much valuable timber.

Manures—A gill of foul water from the barnyard, or a handful of manure (animal droppings, decayed straw, leaves or muck) put into a hill will produce at least one more good ear of corn; a hundred gills of the liquid, or a hundred handfulls of the manure, will produce a hundred ears. How about a hundred bushels more? Every possible shovelful of manure that can be collected or made anywhere on the premises, should be cared for. Let the imagination dwell upon a mountain of good manure next Spring, and fancy the results it will yield; then make a business this Winter, beginning to-day, of increasing the mountain to the largest possible size, and having it of the best possible quality. Gather up the fragments; see to it that not an ounce of vegetable or animal matter be permitted to waste its gases in the air, nor a gill of brown liquid to run to waste from the yard or stables, or privy. It pays to save it all to be placed in the soil to nourish growing plants.

Plowing in Autumn is highly beneficial. The new soil turned up (and some should be every year), is ameliorated by frosts. The herbage turned under is saved; on the surface much of it would be lost in decay, or washed away by rain and melting snows. Soils plowed now are dry and warm at an earlier day in Spring and ready to plant or sow sooner. Plow up now every acre possible.

Potatoes—See page 333. Warmth with moisture are injurious, next to actual freezing. Dryness, and a cool but not freezing atmosphere, in the cellar or earth-covered heap, are essentials. When in out-door heaps, dig a deep trench around it with its mouth to the south, so that the bottom of the heap always dry. Add more earth to the heap only as needed by the increasing cold, always spatting down each layer of earth smoothly to shed rain.

Poultry, welt cared for, pay by the meat, the eggs, and the home-made guano they produce. The secret of having eggs all the winter is to give the hens the advantages of Summer, viz.: warm shelter, light, water, and some animal food to supply the absence of insects which they gather in Summer, with lime enough to make egg shells. They devour and grind up the weed seeds among the grain tailings fed to them; they eat almost every kind of grain; the bones and scraps of *fresh* meat they devour greedily and convert them into eggs. A cake of scraps from the fat-trying establishments, costing hardly a cent a pound, thrown into the yard or where they can get at it, will supply good, cheap, animal food. They will peck at and devour it until the last bit is consumed. Give them also the cabbage leaves, potato parings and other refuse vegetables. See page 268, September *Agriculturist*.

Pumpkins—Avoid bruises in handling; store in a cool dry place, always free from frost; remove seeds when fed; dry as directed last month.

Schools—A well disciplined mind, stored with knowledge, is a better fortune for your children than broad acres, or a mint of money. With the former, they will be able to take good care of themselves; without, the property inheritance will be of little value. Secure good teachers; always speak respectfully of them, or your children will

not; don't send the children from comfortable homes to a poorly heated, badly ventilated, homely barn on the road side—called a "school-house"—if your effort can improve the building and its arrangements. You would not put a colt out to pasture for a season without inquiring after it, and going often to see how it prospered; would you send a child to the care of another, and never go to see how it fared, and manifest no special interest in its progress and mental growth. Three or four hours of close mental application is all the young child can endure at home and in school, without sacrificing the growth and health of the body; an active mind in a poor sickly body is of little account. A cheap teacher, one who will accept low wages because not smart enough to do any thing else, is bad economy. Many spend $20 to $50 dollars in clothing and getting a scholar to school, but lose half the benefit by scrimping a shilling in the purchase of suitable books. Let every child daily practise drawing, with pencil and paper or slate; it disciplines the eye and taste, makes him a better observer, and developes mechanical taste and skill, which are great helpers in any occupation, especially that of the farmer. See "Handy Farmers," page 335.

Sheep are now, and are likely to be, the most profitable branch of farming. (See page 330.) Give them all needed attention in shelter and feed. When kept at an open stack, or exposed to storms, they eat more (to keep out the cold), but thrive less, and suffer more from disease and or colds, manifested by running at the nose. Turn in the buck this month for April lambs. Later lambs, dropped when the grass is well started in May, generally come out ahead in Autumn. Early lambs pay well near cities.

Sorghum is an important crop, in these high-priced sugar days. See page 332.

Turnips will come in good play this Winter, especially where the hay crop is short this year. Leave them growing as long as it is safe to do so. If caught by frost, cover them with soil before they thaw in the least, and gather when the frost is out. Pull and cut off the tops. If dry and warm, let them lie on the ground until towards evening to dry the adhering soil. They can be stored in a dry cellar, or in heaps covered with straw and soil, pointed up and smoothed with the shovel back to shed rain. They keep better if allowed to sweat and dry for a few days in open heaps.

Weeds—Gather carefully and burn, or compost in a heap of vegetable manure to destroy their vegetating power.

Winter Grain—It is bad policy to feed off the thick growth in Autumn; let it remain as a Winter protection and Spring mulch. Look after the standing water. See suggestions on draining, preceding page.

Orchard and Nursery.

Important work is to be done both in the Orchard and Nursery, between now and settled Winter weather. In Autumn, as soon as the leaves begin to fall, is the best time of the year for transplanting hardy fruit trees and small fruits, and no investment yields better returns in the long run, when the trees are judiciously selected and properly cared for. Transplanting, manuring, pruning to promote growth, and root-pruning to induce fruitfulness, labeling and staking trees, banking around their trunks to keep mice away, gathering late varieties, and marketing or storing, destroying insects, making cider, and drying fruit, will constitute the main work of the orchardist. The nurseryman will have trees to take up, pack, and market; young seedlings or stocks to graft or "heel in" (or store in the cellar), for grafting in Winter; cuttings, cions, and layers to gather, furrows to turn against young nursery rows, seeds and pits to procure, labels to provide, etc.

Cider—Use good, ripe fruit for the best cider, and poor fruit and pomace washings for common vinegar, p. 336.

Compost—For light soils, with each cord or 100 bushels of mud, muck, peat or heavy loam, mix 10 bushels wood-ashes, 20 or 30 bushels fresh manure, half-a-bushel of salt and a peck of plaster, together with all the decaying vegetable refuse available; for heavy soils, use sand and light loam to cold and heavy loam.

Dry apples for market, for use and for the soldiers.

Pruning is better done now than in Spring, but best in mid-summer. Trees to be transplanted should be pruned in proportion to the curtailment of roots in taking up. Have a sharp knife and make smooth, slanting cuts. Root-pruning may be advantageous to induce fruitfulness. Cut off the tap root, so that the lateral roots will push vigorously early in Spring. Cut with a sharp spade.

Fruit—Spread out on shelves or on the floor to guard against dampness and mustiness. Keep all fruits dry, and as cool as may be without danger of freezing. For transportation pack apples in clean barrels with *dry* oats, chaff, bran, or forest leaves.

Frosted Trees—Cover at once with dryish, light soil, so that the frost may be extracted gradually.

Grapes—Hardy vines may be planted now. Be sure to get the best *proved* varieties, as they require neither more room nor time than those which will yield less valuable, less profitable fruit. Give them rich soil well worked to the depth of three or four feet, with a generous admixture of rotten wood, leaves or sawdust, scraps of old leather, crushed bones, etc., and a southern exposure, protected from heavy winds and early morning sun. Set them a little deeper than they grew, and pack mellow soil firmly around their roots, allowing no fresh manure to come in direct contact with them. Prune out all secondary shoots, and cut back the main stem to two good eyes or buds. Protect old vines by bending them down and covering lightly with earth. Make hillocks about eighteen inches high around young vines, with dirt brought from beyond the area of their roots. As the remaining tops should be pruned away in Spring, no harm will be done if they winter-kill, unless wanted for cuttings, in which case bury them as directed for older vines.

Insects—Destroy borers, bark-lice, worm nests, etc. One killed now saves killing thousands next year.

Label or map every tree, so that the name and nature of its fruit may be readily ascertained. Strips of sheet zinc written on with a sharp awl make very good labels.

Manuring in Fall stands approved. It protects the roots of trees during Winter and nourishes them thereafter. Apply well rotted stable manure, or leaf mold, lime, coal ashes, etc. Pears especially appreciate very liberal manuring. Peach trees may be surfeited, and should be manured sparingly, according to the richness of the soil. Soap suds and urine are excellent for grape vines, pear and apple trees in grass plots, currant bushes, etc.

Packing Trees for Transportation.—The roots should be well filled in with damp moss, if it can be obtained. Thorough puddling in mud will answer for short distances. Bundles to go far should have a stout, straight stick placed in the center, packing the trees around it. Bind on long straw outside the bundles, roots and all.

Staking—Set two strong stakes opposite each other and parallel with the body of the tree a few inches distant and about four feet high, then fasten one end of a firm band of straw or listing on the top of each stake, pass each band around the trunk of the tree and back to the same stake, and fasten it. Thus the tree will be held from both directions without rubbing against either stake.

Taking up Trees—The small roots are the mouths of the tree. If broken off, the tree is put back at least until more rootlets are formed. Buy no trees with badly mutilated rootlets, if it can be helped.

Transplanting—Do not thrust trees into "by 9" holes, like stakes and fence posts, if you want them to pay well. Dig up broadly and deeply, as this can only be done once in the lifetime of the trees. The better this is done the longer will the tree flourish and bring forth fruit. If the soil is very heavy dig extra deep, then set the trees near the surface level, and make hillocks around them to the proper hight for covering the roots well, so that water will not stand around the roots.

Vinegar—Make a large supply from poor quality apples and washings of cider pomace, as directed on page 336.

Kitchen and Fruit Garden.

Those having little forethought or energy will not find much November-work in the Fruit and Kitchen Garden; the enterprising gardener will see an abundance to be done, *and do it*. He will improve the time between now and the setting in of Winter in laying the corner stones as well as the plans for another year's prosperity. He will add to his choice fruits, both large and small; extending his hot-house, cold frame, and hot-bed facilities; enlarge his asparagus beds; and above all, strive to increase the productive capabilities of every rod of his ground, by manuring, subsoiling, trenching, or draining.

Asparagus is a luxury in early Spring. New beds may yet be planted with seeds, but get roots, if practicable, as they will bear cutting a year or two sooner. The soil should be well worked to 2 feet deep, and can hardly be too rich, half old manure will be none too much. A frequent coating of salt upon the bed is valuable. Set the roots 10 to 12 inches apart in rows 2 feet apart, covering the roots 4 to 6 inches deep.

Blackberries may still be set where the ground has not frozen. Protect the New-Rochelle and other choice or tender varieties, in cold climates, by bending down carefully, and covering with a little earth.

Cabbages—Put into the cellar or trenches before freezing weather. Young plants, placed in cold frames, may be made to produce early cabbages just when they will taste most delicious, or sell at a good price.

Celery—Earth up when the soil is dry. Late in the month cover in the trenches with soil.

Cold Frames—Provide plenty room for cabbage plants, cauliflowers, lettuce, radishes, etc., and good covering to lay over during coldest weather. Keep them open, except when there is danger of freezing. Secure some ventilation, even when most thoroughly covered. The sides must be banked up warmly. The extra covering to lay over the sashes may be straw, leaves, blankets, or whatever is most convenient to shut out cold.

Compost—The more the better. See Orchard and Nursery directions for making.

Currants and Gooseberries—Be sure to have enough for a good supply. Other fruits may fail. Set out new roots, make cuttings, destroy borers and other hostile insects, and manure, if needed. Chip manure is good. It pays, in many cases, to remove the old soil from beneath the bushes, and replace with fresh earth.

Drain, with good underdrains, every rod of garden land that is wet, cold, or backward in early Spring. Besides forwarding the work before a hurrying season, and increasing the crop, it will pay in extra earliness alone.

Figs—Remove to cellar, or otherwise protect thoroughly. Barrels set over small trees, and filled with earth, are the most convenient.

Fruit Trees—One can hardly have too many of choice kinds, well planted out. Single trees, ten or twelve years from the seed, often yield greater profits than half an acre of wheat. "A word to the wise," etc. See Orchard and Nursery directions for setting. Also article on page 306, September *Agriculturist*.

Grape Vines, occupying but a fraction of a square rod, often yield more profit than a whole acre of grain! Is there not room for a few more choice vines? Get the best proved varieties at once, and set them where the roots can go down deep in rich soil. Give them plenty of broken bones, old leather, and soap suds.

Mice—Leave no rubbish above ground to harbor them. They will not breed in the compost heap! Set traps, and spare no pains to exterminate them.

Mushroom beds may yet be made. For full directions for culture, see *July Agriculturist*, page 213.

Onions—Give those left in the ground over Winter a slight protection of earth or litter.

Parsneps, Salsafy, and Scorzonera are not injured, but rather benefited, if left in the ground over Winter.

Raspberries—New roots may yet be set out with safety. Bend down and cover lightly with earth the canes of tender varieties wanted for next year's fruiting.

Rhubarb—Divide large roots, and re-set. Cover crowns with coarse manure, to be forked in next Spring.

Spinach—Thin out winter plants to about nine inches apart. Give light covering with straw or litter when severe weather approaches.

Squashes, Pumpkins, etc.—Keep in a dry, cool cellar, or other place secure from freezing. The prize exhibition at the *Agriculturist* Office commences Nov. 5th.

Strawberry Bed—Spent tan bark proves the best winter protection, and it is settled that protection, even in the latitude of the city of New-York, increases the crops materially. Straw or forest leaves will do, if kept down by brush. Saw dust brings in grubs.

Turnips—Let late crops grow as long as there is no danger of freezing. If caught by frost, cover them with earth, until the frost comes out, and then take up.

Flower Garden and Lawn.

The blooming season of nearly all flowering plants and shrubs is over, except the Chrysanthemums. These are now in their prime and glory, and will continue to be, until Winter is fully upon us. See hints and directions for a general clearing up, and preparing for Winter, p. 338.

Climbers, and most shrubs, will be benefitted by slight protection. Take the climbers down from the trellises, and throw a little straw, leaves, or even earth upon them. Shrubs too rigid to be bent over, may be protected by binding straw or matting around them.

Dahlias, Gladioluses, and other bulbs or plants liable to injury by freezing, should be taken up, and put into dry, cool winter quarters.

Hedges may still be planted out. Try a few rods of dwarf pear hedge, setting the trees 2 feet apart, in rows 6 feet apart.

Hyacinths, Tulips, Crown Imperials, Crocuses, and other bulbs, should have been planted last month; but it is not too late now.

Lawn—Give a top-dressing with fine manure. Rolling is beneficial, where the soil is light, and the turf not established.

Perennials—Divide large roots and transplant. They will flower better another season, if transplanted now, instead of waiting until Spring.

Shade Trees of hardy, deciduous kinds, may now be transplanted. Take time to do justice to all their roots.

Terracing, Laying Out Walks, Grading, etc., is appropriate work for this month.

Green and Hot-Houses.

The heated apartments will require special care this month. The great danger with beginners at least, is in giving too much heat early in the season. This is the natural season of rest for most plants, and they should not be stimulated by a high temperature, nor be drenched with water. Where the collections are large, with several houses, or apartments, and early winter bloom is desired, an assortment may be put into one or more houses or rooms and heat and moisture given to force them into growth for flowering. As far as possible, plants of the same nature should be kept in the same room. Some require much moisture and should be so arranged that they can be sprinkled and syringed freely, to maintain a humid atmosphere. Others need less warmth and a drier air which can only be regulated by keeping them in separate rooms.

In the Green-House, very little fire heat will be required, and that only on the coldest days, covering well with shutters at night. Water moderately, just enough to keep the plants from drying up.

Some of the late-growing and half-hardy plants are still in the borders, but all should be taken in or be put in pits by about the middle of November, according to the latitude. A few of the more hardy plants, such as hydrangeas, some of the tea roses, etc., may be strawed up, or have evergreen boughs placed around them and remain in the borders over Winter. It is not the freezing that injures them, but the sudden changes from heat and sunlight to frost and the reverse. One of the best protections where it can be given, is a covering of earth.

Plants in pits will require frequent ventilation while the weather continues warm—much more when first put in than after they have become accustomed to the change. When the weather becomes settled cold, put on the shutters, straw, mats, etc., and if covered with snow let it remain until mild days admit of opening the pits. To guard against mice, place a little poison among the plants, or leave baited traps.

One of the first things in the heated department, is to provide a good stock of cuttings for Winter and early Spring blooming plants. Give them a moderate heat until rooted, after which they may be forced into rapid growth. See that all the plants requiring potting are changed at once. Cut back straggling and weak plants, to form a good bushy head and infuse new vigor into them. A weak solution of guano-water, or the leachings of hen manure may be given to lagging plants.

Watch carefully for insects and destroy them before they increase. Dipping the affected plants in water heated to 130° is a favorite method of destroying insects with many florists. Some add a little grease, or sulphur, or both. Subsequent syringings will soon clean them.

Apiary in November.

Prepared by M. Quinby—by request.

Bees that have received seasonable attention, will need little care this month. Any neglect they should not be longer delayed. Unfilled boxes should be safely stored for next season's use; any dry combs in them, may remain for another year. Secure them from the mice, or they will be spoiled. Put covers to boxes exposed to the weather.... Hives containing bees, may be painted now, without seriously injuring them. It is not always best to paint hives, but when it is desirable let it be attended to at this season.... Honey to be strained that has stood a long time, after the bees are removed, will require warming, to make it drain out freely.... Contract the entrance to the hives, sufficiently to exclude the mice.

Fruit Growers' Meetings.

These gatherings at the office of the *American Agriculturist*, at 2 o'clock P. M. on Thursday of each week, continue to increase in interest—as many as a hundred persons specially interested in fruits being sometimes present. The leading fruit men of this vicinity and elsewhere, amateurs, orchardists, nurserymen, and business men of the city who have their country places, come together, choose a chairman, and spend one to two hours in testing fruits, discussing their merits, examining new sorts, talking over modes of culture, and the best varieties, in a social manner. In this way an interesting and profitable hour or more is passed, and the growth of good fruits is promoted, while poor kinds receive their just deserts. From the free manner of the discussions, it is not a good place to send a poor "ax to grind," unless the owner desires to have the edge ground square off. We do not present a detailed report of the meetings, for want of space; but some of the good hints brought out, from time to time, will be found scattered through our paper. See report on Adirondac grape, page 330, and the list of commended pears, and other lists, in the basket columns.

Exhibition Tables at the Office of the American Agriculturist.

During the past month our tables have presented an attractive and instructive display of various products, especially of fruits, the daily show being from 150 to 250 plates of apples, pears, grapes, and other fruits. A great number of apples and pears were exhibited their proper names. Many monster pears have been shown, some of them excelling in size any specimen of the same variety previously reported. A few are noted elsewhere. W. S. Carpenter alone, exhibited 100 varieties of apples. The following articles have not been before reported.

Apples.—Porter, Fall Pippin, seedling for name, Cheesebrook Russet, from R. Williams, of West Bloomfield, N. J.... Mixie, Summer Queen, from J. Trowbridge, New-Haven, Conn....Fall Queenes, variety for name, from Chas. Adams, of Linden, N. J....Sour Bough, Red Gilliflower, from A. J. Caywood, of Hoboken, N. J....Golden Gate, Fall Pippin, R. G. Greening, from J. Van Riper, of Lodi, N. J....Seedling Blush, from J. L. Lockwood, of Stamford, Conn....Dutch Codlin, Golden Russet, Jersey Sweet, Jersey Greening, from N. Y....Alexander, Egg-Top, from S. B. Noble, of Chatham Four-Corners, N. Y....Blush Apples for name, from John Moody, of Illinois, N. J....Alexander (fine), from Mrs. Dr. Peter, of Fawling, N. Y....Porter, from Dr. Ward, of Newark, N. J....Golden Pippin, from P. T. Stephens, of Nyack, N. Y....Seedling for name, from P. V. Le Roy, of Peekskill, N. Y....Gloria Mundi, from S. T. Brown, of Bergen Point, N. J....Cod Apple, from E. H. Allen, of N. Y.... Dutch Codlin, Golden Pippin, Weaver, of Fordham, N. Y.... Varieties for name, from G. W. Douglas, N. G. Mattison, F. C. Good, J. G. Holbrook, Wm. Agnew & Sons, J. W. Rockwell, Mr. Gilbert, Dr. Underhill, Dr. Lawrence, Mr. Bonn.

Pears.—Beurre d'Anjou, Louise Bonne de Jersey, Flemish Beauty, Beurre Diel, Seckel, Duchess d'Angouleme, Vicar of Winkfield, Striped Dean, Urbaniste, Beurre Gris d'Hiver, Doyenne Boussock, White Doyenne, Orange Bonne Ardlet, 10 varieties for name, Belle Lucrative, from J. Van Brunt, of New Utrecht, L. I....Bartlett (fine), Louise Bonne de Jersey, Branch of Flemish Beauty, extraordinarily large, Beurre Diel (fine—4 weighed 4 lbs. 4 ozs.), Duchesse d'Angouleme, Vicar of Winkfield (4 weighed 3 lbs. 2 ozs.), Glout Morceau, from Mr. Mavonough, of Irvington, N. J....Bartlett (specimen large) Duchesse d'Angouleme, from Thos. Vernon, of Brooklyn, L. I....Beurre d'Anjou, from Thos. Andrews, of West End, N. J....Beurre Bonne, Pendant d'Aremberg, Seckel, from Bronxville, from J. P. Swain, of Bronxville, N. Y....Fondante d'Automne, Urbaniste, Vicar of Winkfield, Orange, 8 native, variety for name, from J. G. Holbrook, of Chappaqua, N. Y....Seckel (fine), from D. P. Halsted, of Harrison, N. Y....Seckel, Beurre Diel, Pear of Pean, variety for name, from Isaac Hicks, of Hempstead, L. I....Duchesse d'Angouleme, (very fine—from a hedge, on guince, of 1000 feet, 6 years old—dwarf), Beurre Diel (very fine), Urbaniste, from T. W. Field, of Brooklyn, L. I....Beurre Diel, Seckel (large), Louise Bonne de Jersey, from G. S. Stephan, of Hastings, N. Y. Winter Nellis, variety for name, from H. A. King, of Long Island Brook, N. J....Louise Bonne de Jersey (fine), Bartlett (very fine), from P. T. & J. T. Ten Eyck, of Middletown Point, N. J....Duchesse d'Angouleme, 4 varieties for name, from Mr. G. O. Street, of Mt. Vernon, N. Y....Beurre d'Anjou, variety for name, from I. S. Carlton, of Richmond Valley, Staten Island....Beurre Diel, Beurre Bosc (very fine), from A. Youngs, of Matinicock, L. I....Maria Louise, from N. W. Cheeseman, of N. Y....Louise Bonne de Jersey (very fine), from Duchesse d'Angouleme, from Mrs. Pearson, of Newtonkirk, L. I....Urbaniste, from Dr. Riggs, of Plainfield, N. J....Flemish Beauty, (very fine—weighed 16 ozs.—16 same size on tree 12 feet high), varieties for name, from C. Bement, of Bloomingdale, N. J....Des Mons Leon Le Clerc (very fine), from John Egan, of New Brighton, Staten Island....Pound Pears, from J. Ridgway, of Staten Island....Gipe Pear, from R. R. & G. Ward, of Westchester, Penn....Duchesse d'Angoulemo (fine, on dwarf tree planted last April), from S. R. Trimbly, of Bergen Point, N. J....Osway Beurre, Beurre Capiaumont, Beurre Clairgeau, Orange Judd, of Flushing, L. I....Beurre de Capiaumont, from Jas. Hogan, of Rahway, N. J....Duchesse d'Angouleme, from Henry C. Schroeder, of Red Bank, N. J....Nec Doyenne, Duchesse d'Angoulome, Louise Bonne de Jersey, from E. Williams, of West Bloomfield, N. J....Chinese Sand Pear, Seckel, Duchesse d'Angoulemo, Vicar of Winkfield, 13 varieties for names, from S. T. W. Sanford, of Ravenswood, L. I....Beurre Clairgeau, from J. R. Rappelye, of Astoria, L. I....Duchesse d'Angoulemo, Beurre Clairgeau, Beurre Piquerre, Calebasse Nertuan, Louise Bonne de Jersey, Howell, Seckel, from B. Stevens, of West Hoboken, N. J....Seckel (very fine), from G. M. Usher, of Port Richmond, Staten Island....Chinese Sand Pears, from A. Leggett, of Clifton, N. J....Duchesse d'Angoulemo (very large, Orange, weighed 21 ozs., circumference 13 inches,) from A. Childs, of New Market, N. J....Duchesse d'Angoulemo (dwarf), from Wm. Day, of Morristown, N. J....Urbanistes, from P. B. Tyler, of Springfield, Mass....Virgalieu (fine), from W. B. Smith, of Belleville, N. J....Flemish Beauty, from Dr. Freeman, of Astoria, L. I....Choke Pear (double), from W. Ely, of Bull's Ferry, N. J....Rappelye Seedling, from D. R. Remsen, of Astoria, L. I....Rappelye Seedling, from B. S. Pike, of N. Y. ....Bartlett, Belle Lucrative, Swan's Orange, Golden Beurre, variety for name, from Dr. Ward, of Newark, N. J....Varieties of Pears for names, from Chas. A. Whitney, D. S. Manners, J. W. Evarts, J. H. Gibson, I. S. Morris, C. S. Rust, Mr. Cross, Mr. White, John Ruhtyen, N. F. Graves, R. Lewis, Underwood Farm, J. C. Mareh, Wm. F. Heins.

Grapes.—Michigan, Catawba, Isabella, variety for name, from N. B. Haskell, of Monroe, Mich....Black Hamburg, Damascus, from D. R. Remsen, of Astoria, L. I....Catawba, Isabella, from John Cole, of Tompkinsville, States Island.... Montgomery, from I. L. Young, of Poughkeepsie, N. Y.... Purple and Amber Grapes, (Blood's Seedling,) from Dr. Ward, of Newburgport, Mass....Delaware, from W. H. Honeyne, N. Y. City....Seedling "America," (clusters weighed 4 ozs.) from P. T. & J. T. Ten Eyck, of Middletown Point, N. J....Adirondac, from J. W. Bailey, of Plattsburg, N. Y....Catawba, from Rev. J. Weaver, of Fordham, N. Y....Isabella, Clinton, from E. Williams, of West Bloomfield, N. J....Seedless Grapes, from S. Gaylord, of Terryville, Conn....Concord, Hartford Prolific, Gerry & Sons, of Bridgeport, Conn....Grapes from Frederick Kindley, of New Holland, Ind....Isabella, extraordinary large, from John Egan, of Staten Island....Black Hamburg, Golden Chasselas, White variety for names, from Chas. Mandewirth, of Flskill, N. Y....Scedling Grapes, from Mr. Pollock, of Morrisania, N. Y....Native grapes, from Mr. Patten, of 110 Broadway, New-York City. Varieties of Grapes for names, from J. Moody, W. Craig, Prof. Bradbury.

Peaches.—Union Peach, from D. Sutphin, of Washington Market, N. Y....Catherine Peach (one in pot, 3 years from bud, full of fruit, from Jas. Wiggins, gardener to Jas. Brown, Esq., of Weehawken, N. J....Red-cheeked Peach, from Sutphin & Lyon, of 100 Washington Market, N. Y....George the IV Peach, from Rev. J. Weaver, of Fordham, N. Y.... Bergen's Yellow, from Geo. Hayward, of Brooklyn, L. I.

Other Fruits.—Curious grown plums, from H. T. Hewitt, of Scotch Plains, N. J....Seedling Plums, from W. Smith, of Belleville, N. J....Raspberries (3d crop), from Mr. Carnell, of Mt. Vernon, N. Y....Cranberries (very fine), from Chas. L. Davis, of Plymouth, Mass....Cranberries, from Thos. Hancock, M. J. Spence, of Edenvale, L. I....Tomatoes (fine), from A. Peyrot, of Tremont, N. Y....Tree Tomato (in full bearing), from E. Williams, of West Bloomfield, N. J....Clusters of Tomatoes, from John Metz, of Hudson City, N. J....Perfected Tomato (very large), from H. Clark, of Yonkers, N. Y.... Red Currents (Sept. 28), from S. Bell, of N. Y. Orphan Asylum....Pear Quinces, from Mr. Cortelyou, of Marsland, Staten Island....Apple Quinces (very fine—one weighed 17 ozs., circumference 18 inches, from J. C. Van Nest, of North Orange, N. J....Apple Quinces, (fine—11 weighed 7 lbs.), from A. G. Syms, of Rahway, N. J....Osage Orange fruit, (fine), from Rev. J. Weaver, of New Utrecht, L. I....Figs from D. R. Remsen, of Astoria, L. I.

VEGETABLES, SEEDS, ETC.

Potatoes.—Pink Eye Russet, Cuzco, Coppermine, Prince Albert, Garnet Chili, Jersey Mercer, New Seedling Mercer, Peach Blow, from E. Williams, of West Bloomfield, N. J....Prince Albert, Peach Blow, Potato from New Mexico (fine), California Reverse, Early Purple, Early Pink Eye, from F. F. Heins, of Woodstock, N. Y....Peach Blow (230 bushels on just one acre), from G. P. Gott, Mulford Station, N. J.....Peach Blow, from Wm. Forbester, N. J....Cuzco, Mexico, Potato with 9 heads, from P. Malone, of New Durham, N. J....Prince of Wales, Prince Albert, from E. A. Bulkley, of Williamsport, Mass., Pink Eye Russet, from Mr. Cortelyou, Jersey, from John Curtis, of Chatham Four-Corners, N. Y....Peach Blow, from Jos. Sedlington, of North Islip, L. I....Red Sweet Potato, from R. R. & G. Ward, of Westchester, Penn....Nansemond Sweet Potato (weighed 8¾ lbs.), from W. F. Walker, of Goldsboro, N. Y....Sweet Potato (weighed 2½ lbs.), from W. A. Cummings, of Essex, Conn.

Other Vegetables.—Blood Beets (very large), from Conrad Scholl, of Washington Square, L. I....Blood Beets (fine), from H. Schotte, New-York City....Rutabaga and Long Blood Beets, from A. H. Smith, of Stamford, Conn....Silver Skin and Red Onions (fine), from Mrs. E. G. Wheeler, of Hartmount, N. Y....Onions (very large, weighed 3½ lbs.) from Conrad Scholl, of Washington Square, L. I....Vegetable Marrow Squash (very fine), from O. A. Van Lennep, of Orange, N. J....Cultivated Carrots, from J. Van Brunt, of New Utrecht, L. I....Cotton Plant, (very fine—raised from seed from *Agriculturist* office) from Wm. I. Serrell, of Bayonne, N. J....Island of Sea Island Cotton Plants, (growing) from A. Harris, of 174 East 17th street, N. Y....Super moth Nutmeg Melon, from J. Van Riper, of Lodi, N. J.... Vegetable Egg Gourd, from E. Hall, of Deerpark, L. I.... Fancy Gourds, from Jacob F. Braun, of Williamsburg, L. I.... Plant of Red Peppers (very fine), from G. M. Usher, of Port Richmond, Staten Island....Italian Millet, from Mr. Fuller, of Newburgh, N. Y....Millet, from J. McElwee, of Walker Valley, N. Y....Corn (from battlefield of Antietam, Md.), from J. Van Brunt, of New Utrecht, L. I....Cotton from J. W. Rockwell, of Ridgefield, Conn....Water Nuts, (very singular), from Fritz Meyer, of Dessau, Germany.

FLOWERS.

Dahlias (fine collection), Cut-flowers (late and rare), from C. S. Pell, of N. Y. Orphan Asylum....Cockscomb Seedling Phloxes and Verbenas, from W. & J. Cranston, of Hoboken, N. J....Bouquet of flowers, from Miss Emily Studley, of Thompson's Station, L. I....Dahlias, from A. S. Fuller, of Brooklyn, L. I....Cut-blooms of Balsams and Pansies, (beautiful), from Rev. J. Weaver, of Fordham, N. Y....Dahlias, from Mr. Lee, of Brooklyn, L. I....Dahlias, from A. Saltford, Dansprerie, from H. Bussard, of Yonkers, N. Y....Dahlias, from H. C. Ward, of Newark, N. J....Cut-blooms of Cockscomb (very fine), from J. Fossett, of Mott Haven, N. Y.... Phlsiantins Albens, from D. Cordier, of College Point, L. I. Blooms of Passifiora Decaine (very beautiful), Tuberose, Geranium, etc., from A. P. Cummings, of N. Y.

MISCELLANEOUS.

New Jersey Marl, from Ed. Pitcher, of Eatontown, N. J.... Fruit Labels, from Isaac Hicks, of Hempstead, L. I....Egg (large—weighed 4 ozs.—common fowl,) from S. W. Thomas, of Hudson City, N. J.

Men of the noblest dispositions think themselves happiest, when others share their happiness with them.

Containing a great variety of Items, including many good Hints and Suggestions which we give in small type and condensed form for want of space elsewhere.

Read the Calendar.—A large number of hints are condensed into the Calendar of Operations.—This is not a stereotyped affair, used from year to year, but is written for every paper, and generally revised by a new hand, and hence contains new suggestions in every month in every year. Any additional items in this department will be gladly received. We mean to make the Calendar alone worth far more than the cost of the paper.

Where are the Armies?—The map on page 248 will help to follow the great Western armies in Kentucky, or in Tennessee if they go there. The magnificent map of *Virginia* offered as a premium, on page 252, gives the most minute localities of every part of that State, so that every movement of the great Eastern armies can be readily traced. This map is alone worth a dollar, at the usual price of such maps. The maps of the Southern States, and of the whole United States, are also very desirable. We cannot promise any of these maps on the same terms after this month.

Bring Out the Pumpkins.—We invite all who have big pumpkins or squashes, or those specially valuable, if not so large, or fancy gourds, to contribute them to the *Show* to be held Nov. 5th. See particulars on page 349. Let us have an exhibition that will far excel the similar one now in progress in London, under the auspices of the Royal Horticultural Society, and show that, in fact "Americans *are* some pumpkins."

Exhibition of Northern Grown Cotton.—From the few responses to our proposition for a prize exhibition of Northern Grown Cotton, we are in doubt whether many persons are preparing to exhibit. One writes that cotton has gone to so high a price that he can spare none for the show. Will all who are intending to exhibit specimens please write *immediately*, giving particulars, and offering suggestions as to best arrangements for the exhibition, rules for examination and awarding premiums, etc. For several reasons the exhibition can not take place before the middle of December. After hearing from our correspondents we can make a more definite announcement.

The Premium Strawberry Plants.—We have sent out about **40,000** plants the past season, and so far as we have heard, all parcels have gone safely and in good order, with barely two exceptions. This is remarkable, and demonstrates the feasibility of sending plants safely by mail, when rightly put up. These plants, multiplied as they will be, will do much toward introducing at least one good variety over the country, and add to the pleasure of a large number of persons. This is one of the good results of the reduction of postage on plants and seeds. Can not our readers in the *British Provinces*, by petition or otherwise, induce their government to reduce the postage on such articles? To send 8 ounces of plants or seeds by mail 1,500 miles in the States, cost 8 cents, and only 16 cents to any distance. To send the same amount to the British Provinces by mail, often costs $1.60. Some Canadian Postmasters have passed them along, after the 1 cent per ounce has been paid here.——☞ In every case, we have sent on in advance to the recipients of our premium plants, a printed circular, notifying them of the time of mailing them. We are sorry to learn that some did not get the circulars, for they contained several good hints in regard to the best mode of cultivating and multiplying plants.

"Apple Bees" for Soldiers.—L. Palmer, Luzerne Co., Pa., sends to the *American Agriculturist* an account of an "Apple-Cut" in that neighborhood for the benefit of the soldiers. The neighbors, from a mile or two distant, met on a given evening, each bringing a contribution of fruit, which, with the help of patent parers, was quickly prepared for drying. The example is a good one for every locality where fruit is abundant. The Sanitary Commission assure us that there is no danger of too much fruit being sent to the army, and that no more welcome contribution can be made. We call for at least one thousand bushels of dried apples to be forwarded by our subscribers. See Note on page 328. A single peck (8, quarts or 6 pounds) of dried fruit from each family receiving the *Agriculturist*, would furnish *fifteen or twenty buskels* to every regiment now in the field, or likely to be there, though this would be only a pint to each man.

Acknowledgement.—We return thanks to the Officers of many Agricultural and Horticultural Societies, (too numerous to refer to in detail) who have kindly favored us with complimentary tickets and invitations. These have sometimes included a dozen fairs occurring on the same day. In the pressure of other duties, we have been able to visit only those most accessible.

Agricultural Exhibitions.—Though the all-absorbing war excitement frightened many Agricultural Societies into postponement of their annual exhibition, we are glad to note that those which have been held have generally been about as successful as in the average of former years, and in many instances the success has exceeded that of any previous year.

Brooklyn Horticultural Society.—The recent exhibition of this Association at the Academy of Music, was a complete success, both in the amount and character of the articles shown, and the full attendance of visitors. The fruits, particularly grapes and pears, were of the finest description. In the floral department were splendid collections of seedling verbenas, petunias, gladioli, etc. One of the chief attractions was the large show of ornamental-leaved plants, which are deservedly coming into popular favor. This Society has taken rank among the very first in the country, and is greatly improving the horticultural taste of community.

New-York State Agricultural Society.—The Annual Exhibition of this Society, held in Rochester, Sept. 30th to Oct. 3d, though somewhat less successful pecuniarily, than last year, was quite satisfactory. Unpleasant weather, except on the last day, greatly diminished both the entries of articles for exhibition and the number of visitors. There was a good show of Cattle, particularly of Herefords and Ayrshires. Sheep attracted more attention, particularly mutton sheep; South-Downs, Hampshire-Downs, and Shropshire-Downs of excellent quality were shown; Merinos were not as well represented. The display of implements was large, but contained few novelties. The Horticultural Department, under the able superintendence of Mr. Wick, presented very attractive appearances. Altogether, the exhibition was highly creditable to the Society, occurring as it did under the adverse influences of war times and rainy weather.

Queens County Agr. Society, N. Y. The Annual Exhibition of the Society was held this year on the Fashion Race Course—the regular racers of course, being absent. The display was large, especialy in fruits, flowers, and horses, and resulted in large money receipts—amounting to over four thousand dollars.

Fall Plowing for Corn.—John Johnston, of Geneva, N. Y., writes: "I do not agree with your remarks on page 300 of October *Agriculturist*. I have never yet good crops of corn from Autumn plowing. The later in April or May I can plow, and get the corn in before or by May 20, the better the crop. I wish you could see my corn now growing on quite stiff land, where the plowing was finished May 17, the harrow set agoing in the afternoon of the days the ground was broke up, and the corn drilled in as soon as the plowing and harrowing were finished. I have seen the time when, if a farmer planted such land with corn, he would have been thought to know little about raising corn; yet I have had many good crops of corn on the same land for the last 20 years, and I think this year's the best."——But, friend Johnston, you have not told the whole story. Your stiff land is well underdrained, and thoroughly and deeply cultivated, and needs none of the benefits of the course we recommend. Though clayey, it is made dry and pulverulent, and the water being drained out of it, the air gets in during Winter as well as Summer, without turning it up, with plow, in Autumn. Such land is always ready to work, is warmer in Spring, and it stands to reason that on such a soil, a fresh seed-bed, if newly worked, should be just the thing to start the corn up and push it into vigorous growth at once.

Good Wheat in Central New-York. Referring to the *Agriculturist* crop reports, John Johnston of Canandigua Co., writes: "We have excellent winter wheat. I know several fields of white wheat yielding 36 to 40 bushels an acre. These were on summer fallow, or on grass or clover land plowed in August, and top-dressed with well rotted manure before sowing."

Spring Wheat at the West.—Wm. I. Gilchrist, of McGregor, Iowa, writes to correct our estimates of last month. He is a dealer in wheat at that point which he calls "one of the greatest *primary* grain markets in the world, having 12 counties in Northern Iowa and Southern Minnesota tributary to it. From that centre over 2¾ *million* bushels of wheat were sent east during 1861." Mr. G. reports that "Spring wheat is a decided failure in Northern Illinois, Wisconsin, and nearly all through Iowa—probably not three-fifths of a crop, and that of inferior quality, owing to the chinch bug. Last year the wheat of all this region, if taken collectively, would make 'No. 1 Milwaukee Club;' the present crop will not make No. 2. In Minnesota, Spring wheat is fair both in quantity and quality."

The Pear as a Hedge.—Very fine Duchesse pears have been placed on our tables, which were raised by Mr. T. W. Field, of Kings Co., L. I., on a hedge-row of this variety. He has 1,000 feet of Duchesse on the quince stock, set 2 feet apart, in West rows, and well cut back. They have been planted 6 years, and are now giving good crops of extra large pears, one of which weighed 21 ounces. The hedge will not turn steek, but forms a fine screen, thus combining profit and beauty.

Large Specimens of Fruit.—The Exhibition Tables at the office of the *American Agriculturist* bear testimony to the general abundance and excellence of fruit this year. The display for weeks past has been such as we have seldom seen equalled at any County Fair. Besides the great variety shown, several extraordinary specimens have attracted much attention. Among these we may mention: two Duchesse D'Angoulemе pears, one from Mr. Child, Newmarket, N. J., the other from T. W. Field of Brooklyn, N. Y., each weighing 21 oz.—a Flemish Beauty from C. Devlin, N. Y. City, weighing 16½ oz.—Mr. McDonough of Irvington, N. J., exhibited 4 Beurre Diels, weighing together 4 lbs. 8 oz., and 3 Vicar of Winkfields weighing 2 lbs. 2 oz.—Three Bartletts from P. T. & J. T. Ten Eyck, Monmouth Co., N. J., weighed 2 lbs. 6 oz., and 3 Louise Bonne de Jersеys, 30 oz. An apple quince exhibited by John C. Van Etten, North Bergen, N. J., measured 12¾ inches in circumference, and weighed 17 oz.

Prize Essay on Peach Culture.—Wm. Robbins, Suffolk Co., L. I. But few essays on this topic were received in competition for the prizes. Although these contained good suggestions, the Committee did not deem either of sufficient merit for publication.

Will Tobacco Mix? asks "Connecticut River Subscriber." The different varieties, when blooming together, will doubtless hybridize the *seed* so as to injure it for another crop. The growing plants will not be changed in character, until after the seed is affected.

Silk Weed.—Our Canadian neighbors are utilizing the silky egrets or coma of the Asclepias *cornuti*, by mixing it with cotton, producing what they term "Canadian Silk Cotton." They also manufacture a flax from the stems of the Asclepias *incarnata*. This plant is nearly allied to the Calotropos *gigantea* of India, which, mixed with cotton, forms the celebrated Mudar Silk Cotton, and from the fibres of which is made the strong "Bowstring Hemp" of India.

Gazanea Splendens.—M. J. Scott, Franklin Co., O. This comparatively new perennial is not hardy, but requires winter protection in a pit or cold house. Unless having this protection, it is best to obtain fresh plants from a florist, to set out every Spring.

"Packages of Stationery"—A Caution.—Letters are constantly reaching the office of the *Agriculturist*, from different parts of the country, making inquiries about this party or that one, who is sending out circulars, and advertisements, offering "packages of stationery" which are represented to contain any quantity of writing materials, articles of jewelry, etc., etc. "worth a dollar," but "in consideration of the times" to be sold for 25 cents, with a large discount by the quantity, and a watch, or some valuable (or value-less) article, thrown in. As a general reply, we say, that these parcels are not worth buying. They usually consist of a large envelope containing a few common envelopes, and sheets of paper, a sheet of recipes gathered from newspapers, a cheap pen-holder or two, and sometimes a brassy ring, or other trinket—the whole worth, perhaps, 4 to 6 cents. Better buy your paper and pens at a store near home, and save half or three fourths of the money. Nobody is fool enough, or generous enough, to offer 25 cents' worth of stuff, with a watch thrown in, for less than their cost. A good round profit above advertising and other expenses is always provided for.

American Cyclopedia.—Vol. XV of this sterling work is out, and filled with interesting articles—extending alphabetically from "Spiritualism" to "Uzziah." One more volume completes the series. We are obliged to defer to another month a more particular notice of Vol. 15. For the general character of this great work, see description under Premium No. 11, on page 346.

Hot Sucking a Cow.—A writer in the London Field relates, that on visiting his cow shed he found a newly-calved cow quietly lying down chewing her cud, and a huge rat lying at full length between her legs sucking vigorously at one of her teats. He had previously noticed that the cow gave less milk than she should have done so soon after calving.

Apples for Milch Cows.—C. D. Walters, Essex Co., N. J. Sound apples judiciously fed to cows will not lessen, but rather increase the flow of milk. They afford an excellent change of diet. Feed them at the rate of five to eight quarts night and morning.

Sheep Disease in Michigan.—Charles Goodrich, of Ionia Co, writes that a troublesome disease has broken out among sheep there. "Lumps appear on the throat, generally one on each side; these gradually enlarge and close the gullet and windpipe to which they are attached, choking the sheep to death. What is the cause and remedy?"

Small Pox in Sheep.—Recent English agricultural journals give accounts of the ravages of small pox among sheep. It is believed to have been introduced by a flock imported from Holland, and has proved disastrous to many flocks. Precautions are being taken by inoculation, etc., to prevent its further spread.

To Cure Kicking Horses.—"J. R.," in the Rural New-Yorker, recommends the following plan: "Let the horse stand between two partitions. Bore a two inch hole in each, on a horizontal line, about one and-a-half inches above the horse's hips; take a round stick long enough to reach across the stall, and place it in the holes, and put a pin in each end of the stick so that it can not fall out. The horse may try to kick, but will not be able, as the stick will prevent the necessary elevation of his hind quarters, and after a few attempts, he will give it up." This may answer temporarily for an already spoiled horse: better never teach a horse to kick.

Martingals for Horses.—C. B. Wells, Cayuga Co., N. Y. Properly broken horses will never need a martingal. It is used to keep the horse's head in good position, which can be done with the reins if the horse has been rightly trained. It may be of service to control a horse which has learned the vice of rearing, but ordinarily it imposes an unnecessary and painful restraint upon the freedom of motion of the animal.

What is Ringbone?—Young Farmer, Sullivan Co., N. Y. Ringbone in the horse is an unnatural bony growth forming a circular excrescence upon the coronet, or part of the hoof immediately above the junction of the hair and hoof. It results from a strain, usually while horses are young, and causes one of the worst and most incurable forms of lameness.

Skunks versus Rats.—J. J. H. Gregory writes to the New-England Farmer, that he has voted the freedom of his farm to skunks, in return for the service they have rendered in freeing his premises from rats. The latter vermin had taken up their quarters under the barn, but when a skunk presented himself, they gave a wide berth to their unsavory neighbor, and totally disappeared. Mr. G. thinks skunks attack poultry only when they can get nothing else, and that their principal food is beetles and other large insects.

Are Coal Ashes Worthless?—"John." No Sir; neither are they of great value. Still they are worth saving. Their fertilizing power will vary, of course, according to the kind of coal used, and the amount of woody substances employed in lighting the fires. A chemist, who analyzed several specimens of ashes taken from an ordinary grate, states that "they consist almost entirely of the various earths, a small portion of charcoal, and the saline matters, of which the sulphate of lime (gypsum), and lime constitute about one quarter." Turning from science to experience, we find that such ashes make an excellent dressing for grass land, and in some conditions of the soil, give a fine growth of turnips. We have found them useful as a mulch about the roots of fruit trees. Of their utility for walks and roads—the ashes to be covered lightly with gravel —we have often spoken in the *American Agriculturist*.

Wheat, Rye, Oats, and Corn in Wisconsin—Large Yield of Wheat.—Wm. H. Baker, of Racine Co., Wis., writes to the *American Agriculturist*, Oct. 8: Winter wheat has done finely. As an instance, Nathan Burnham, near Racine, sowed 4 bushels of bearded wheat on about 4 acres of clayish soil, well tilled, but nothing more, and measured up 158 bushels, besides some not screened, making over 40 bushels per acre. Farmers are sowing winter wheat very largely this Autumn.—Rye and oats have done better than the average. Corn is happily disappointing all, and turning out well. I have over an acre of sorghum looking finely; no frosts to disturb it as yet.

Wheat Thrashing out Well.—Charles Goodrich, of Ionia County, Mich., writes to the *American Agriculturist*: "I find that upon thrashing, wheat turns out beyond all calculation. In this county it is the best of many years. I do not know of a field grown on well cultivated summer fallow, that has not yielded 35 bushels to the acre, while 30, 40, and even 45 bushels are by no means uncommon. I must boast a little for our county, by telling that one field of six acres yielded over 52 bushels per acre. I had 400 bushels myself on ten acres. Corn well filled; early potatoes poor, late promise well."

New Rice Fields.—The high price of this commodity resulting from non-intercourse with the States whence the chief supply has usually been drawn, is stimulating experiments in new localities. The California Farmer urges cultivators to introduce it upon the lands about the streams, mouths of rivers, which are now lying waste on account of the annual floods. Messrs. Judd & Wilder have just sent to San Francisco an extraordinary crop raised in the Sandwich Islands. An area of 15 acres and 80 feet was cultivated, which turned out 89,200 lbs., or 5,935⅚ lbs. per acre. This, at 6 cents per lb., gives an income of over $350 per acre.

Contract to Raise Onions Offered.—Wm. J. Spence, who claims to be on some of the ostracized "barren or waste lands of Long Island," has tried his hand at onion raising for two years, and is well pleased with the result so far as amount and quality of the crop is concerned; his only difficulty has been in marketing or keeping them. He says that if any one will contract to take nice red, or white silver-skinned onions, delivered at the Railroad in Autumn, at 50 cents per bushel, he will bind himself to furnish 1000 bushels or more, raised on the said lands, and consider the contract a very good one.

Agricultural Inventions in One Year.—In the official list of "Agricultural Inventions or Discoveries for the year 1861," and a war year at that, we count 25 bee-hives, 51 cultivators, 26 churns, 70 harvesting implements, 26 corn planters, 41 plows, 45 seeding machines, 9 thrashing machines, and several other farm and garden implements in smaller numbers.

Size of Cistern and Kind of Pump.—H. Schepper, Owen Co., Ind. Eight feet deep and seven in diameter in the clear, is a good size for a family cistern. This will hold over 3,000 gallons, or 95 barrels—enough for ordinary use. When exposed to freezing, a chain pump is preferable. A Douglass or other iron pump is convenient in the kitchen, or where otherwise protected from frost.

Cisterns and Wells—Convenient way to Examine them.—It is probably not known by most persons, that the bottom of a cistern or deep well even, may be thoroughly inspected for filth, or lost articles, by using a common mirror (looking-glass). When the sun shines, hold the mirror so that the light will be reflected in a bright spot at the bottom of the water, and a pin can be seen at a depth of 10 to 20 feet or more. We have in this manner seen fishes at the bottom of thirty to forty feet of clear water. If this can be did by intervening objects, use two or more mirrors to bend the light by double or triple reflections to the desired point. We have thus thrown the light coming into the dining room window, by one mirror through the door into the kitchen, by another to a corner of the latter room, and by a third mirror cast it down into a cistern sufficiently strong to see a small angle worm at the bottom.—*Amer. Agriculturist.*

Grapes and Grape Wine.—Samples from H. H. Brown, Washington Co., Pa. The wine with 1 lb. sugar to 1 gallon of juice is too acid to be palatable; that with 3 lbs. sugar to the gallon is a mild, pleasant drink. The fruit and wine were exhibited at the Fruit Growers' Meeting, and those who examined them unanimously pronounced the grapes Isabellas.

Grape and Fruit Humbugs.—The present Autumn is developing an amount of rascality in fruit trees and vines, that is almost incredible. The favorable season has produced fruit on nearly every tree, shrub, bush and vine. Almost daily gentlemen bring to the office of the *American Agriculturist* specimens of poor fox grapes grown on vines which they bought at high prices a few years ago, supposing they were getting the best standard sorts. They have lost their money, and time, and patience.—We pity them, but they have themselves to blame somewhat, and for this reason: Most of these vines, if not all of them, were purchased, not of regular nurserymen, those who have a reputation to sustain, but of temporary peddlers and dealers who annually open a shop on Broadway, or a stall in the markets, or hawk around the country trash labeled with any name the purchaser may chance to call for. This applies to fruit trees, flowering plants, etc., as well as to grapes. When the truth becomes known a year or two afterwards, the rascals are *non-come-at-ibus*.—There are more left of the same sort.

Seedless Grapes.—S. Gaylord, of Litchfield Co., Conn., sends specimens of wild grapes of small size, reddish color, which he thinks will prove valuable for cooking, as they are *destitute of seeds*. They are indeed seedless, but it is probable that the hard pulp and the poorer flavor will weigh against the absence of seed. They may answer for sauce, but, as a grape, can not be compared with the standard sorts, such as Hartford Prolific, Concord, Diana, Delaware, etc.

Grape Blight Prevented by Bones and Boots.—F. A. Denny, Macoupin Co., Ill., writes to the *Agriculturist* that he kept the blight, (mildew) from his Isabella vines, while those of his neighbors were ruined, by digging trenches and filling them with old bones, shoes, rags, etc., which he gathered at little cost. Probably the *drainage* afforded by the trenches had most to do with the health of the vines, though the bones and rags furnished good fertilizing materials.

Bleeding Grape Vines.—A. C. Eaton, of Huron Co., O., writes to the *Agriculturist*: "Burn woundeel parts with a red-hot iron, or, first put on shoemaker's wax, then use the hot iron. This drives the melted wax into the open pores and stops the out-flow of sap."

"Vineland Lands."—To a number of inquirers. We have not yet been to "Vineland," and can give no reliable information about the lands in question, until we can get time to go and see for ourselves. The reports are that a large tract of land in New-Jersey, southeast of Philadelphia, has long been owned by England, and that it is now offered on sale in small plots or farms. Of the quality of the land, the title, etc., we can as yet say nothing from actual knowledge. Of course, any one thinking of investing, or fixing a home there, will first make personal observation, and thorough investigation.

Peach Trees in Pots.—This method of growing dwarfed trees is coming into favor with amateurs. Though it would hardly pay to raise such peaches for ordinary marketing, they present such a handsome appearance, when in bearing, as to be a fine ornament in the green-house. A beautiful specimen of the Catherine Peach grown in this way, by James Wiggins, gardener for Jas. Brown, Esq., Weehawken, N. J., is now on exhibition at the Office of the *American Agriculturist*. It is 3 feet high, the limbs spreading about 16 inches each way from the center. It yielded 19 well ripened peaches, part of which still remain on the tree. It is growing in a 13-inch pot, and is apparently as thrifty as any of its taller relatives standing in the open field.

Names of Trees.—"John." The scientific name of the common cork-bark elm is *ulmus fulva*. That of the pitch pine is *pinus rigida*. Both are indigenous in this State.

Synonyms of Apples, Pears, etc.—F. T. R., Ottawa Co., Ohio. You will find most of the various names by which certain varieties of fruit are known in different localities, given in Downing's late work "Fruits and Fruit Trees of America,"—a most excellent book of 760 pages, with illustrations of all the leading varieties of apples, pears, etc. (Price $1.75.)

Sweet-Sour Apples.—Since the reference to these on page 229 (August *Agriculturist*), we have had several letters from parties growing them. N. G. Abbot, Warren Co., Pa., says he has apples which are plainly Talman Sweetings on one side, and R. I. Greenings on the other. He offers no explanations of the anomaly.—M. A. Barker, of Wyoming Co., N. Y., says apples with one side sweet and the other side sour, are obtained by splitting a sweet and a sour cion, carefully tying them together and inserting at the grafting season. Even a bud on each must be split, and the two united just in the outer edge of the cleft, and be well covered with wax. This has been stated before, but so far as we can learn, no one is able to produce the "half and half" apples at pleasure. They appear to be a *lusus naturæ*, a sport of nature, not to be produced by human art with any certainty.

Seedling Apple.—From J. A. Lewis, Windham Co., Conn. Resembles Porter in size, form and color, of whiter flesh, moderately juicy, mild sub acid flavor, and apparently worthy of dissemination.

Manufactory of Flax Cotton.—We learn that Mr. Samuel C. Allen, an inventor of machinery for making flax-cotton, has recently purchased large buildings, water power, etc., in Lawrence, Mass., for the establishment of a manufactory of flax-cotton goods. It is said that the company engaged in this enterprise have abundant means; the present scarcity of cotton will certainly give great encouragement to the undertaking.

When to Gather Cotton.—O. C. Wilson, Williamson Co., Ill. The practice at the South is to commence picking as soon as enough bolls are open to keep the field hands profitably employed. The character of the staple is injured by much exposure to rain, and a heavy storm often causes much difficulty in the picking by tangling the fiber with the burr. Northern grown cotton will need to be picked early, perhaps while the seeds are yet green, which will do no harm, provided it is afterward dried in the sun. It should, under all circumstances, be dried of dew and rain before storing.

Missouri Corn—Housing Stock, etc.—Wm. Russell, of Iron Co., Mo., planted corn on timothy sod, heavily surface manured, dropping 2 kernels at each step 1½ to 2 feet apart, and covering with the foot. Rows 3½ feet apart. Went over each row with 2 horse harrow, having front tooth out, which left the surface light. Followed in 2 weeks with shovel plow, which was all the cultivation given. There were no weeds to trouble the crop. At harvest he found a heavy yield, with 1 to 2 ears on every stalk. He cuts his stalks with a power cutter, and feeds out during the winter. His cattle are regularly housed in cold weather which he thinks more than pays in the diminished food they consume, besides saving the manure which would be lost were they running at large.

Fall Pippins kept until Spring.—M. L. Goff, of Brooklyn, N. Y., writes to the *American Agriculturist*, that last year he bought a barrel of Fall pippins (not winter apples) in the market, and sorted them over into three lots: those perfectly sound; those slightly bruised; and those mellow—throwing the decayed ones aside. They were then all wiped dry with a towel and wrapped separately in pieces of newspaper. They were then packed into an old cheap trunk, the soundest on the bottom and the mellowest at the top, and the trunk set into a small dark closet off from a room seldom warmed in winter. At New Year's a few were taken out and found as good as when put in, and from then until the *last* of April they were occasionally drawn upon, all remaining entirely sound. The last dozen or so were a little shriveled, but still very good.

Working Orchard Lands.—William Ralston, Guernsey Co., Ohio. Moderate cropping rather benefits than injures orchards, provided plenty of manure be supplied, and proper care be taken not to injure the trunks and roots of the trees. A heavy sward excludes air, and is unfavorable to rapid growth or full fruiting. Hoed crops are generally preferable for orchard culture.

Seedling Pears.—C. S. Rust, Oswego Co., N. Y. The pears sent us are undoubtedly seedlings. They appear to be worthy of dissemination among the really good pears, and are therefore entitled to a name.

Test of a Grape.—Mr. G. R. Garretson, seedsman of Queens Co., N. Y., says: a *good* grape is one whose skin we can eat, and whose seeds can be spit out.

Evergreen Vine to Cover a Stump Fence.—C. A. Hindes, Allegany Co., N. Y. The European Ivy is the most suitable evergreen climber to cover the unsightly roots of your fence, and the Holly or Mahonia is the best shrub to fill the vacant spaces. Covered thus, with the evergreen Mahonia to fill gaps, the fence will be quite ornamental.

Lead and Copper Wire.—Lead wire is much used in England for tying up fruit trees and vines to stakes and trellises, also for attaching labels to stakes. It is soft, flexible, durable, and less hurtful to plants than copper wire. It is made of lead and an alloy mixed with it. For the coarser uses of gardening, especially where much strength is required, this is undoubtedly a good thing. Yet for common, every day work, such as tying plants to stakes, etc., we much prefer the old bass matting. This is cheaper, more easily handled, and sufficiently durable.

Second Crop of Hubbard Squashes.—A subscriber in Lamartine, Wis., in a note dated early in September, said: "A Hubbard Squash vine on which seven squashes have ripened, has now a second crop as large as goose eggs. The vine was well shortened-in early in the season."

Coal Tar on Cabbages.—"C. C.," of Jamesburg, N. J., referring to the experience of A. P., page 263, (Sept.), says that if he had diluted the coal tar with water before using, a tablespoonful of tar to a pint of water, it would not have injured his cabbages, but would have kept the slug from them. He "knows it, for he has tried it."

Value of Sunflower Seeds.—E. J., Millville, Pa. Sunflower seeds contain a large amount of oil, which may be expressed and used for burning and other purposes. They are very valuable as feed for poultry, being worth probably as much per bushel as corn.

Bouvardia.—G. T. Rockingham Co., N. H. This evergreen shrub requires the protection of a greenhouse or flower pit, in Winter. It does well for a border plant in Summer. Bouvardia *triphylla* with bright scarlet flowers is the more common variety. They are renewed by cuttings, generally of the roots.

Keeping Geraniums, Verbenas, Heliotropes, etc., through the Winter.—"L. H. R.," Rock Bottom, Mass. A green-house or pit, such as is described on page 273, Sept. *Agriculturist*, is the best place for these plants during winter. They can be kept in a cellar, but will require some care, giving them just enough water for moisture without causing them to mold or damp off.

Flowering the Camellia.—E. S. Bartholomew, Chautauqua Co., N. Y. Repot soon after they are done blooming, which is usually in February and March. Moist recommends as soil for potting: 3 parts loam, 2 parts leaf mold, and 1 part each of sand and well rotted manure. Keep the plants now in pots in moderately cool moist rooms (parlors and living rooms are too dry) until December, when they may be carried to the warmer apartments to prepare them for blooming. Water and syringe them frequently. Eight inch pots are large enough for blooming.

Japan Lilies.—M. T. Scott, Franklin Co., Ohio. These are very pretty, and perfectly hardy. Most florists and seedsmen now have them on sale at 25c. to 37c. per bulb. They may be planted in the Fall or Spring.

Dahlias Changing.—"Ignoramus," as he calls himself, of Bloomfield, N. J., says he purchased choice dahlia roots, and planted with care in 1859. They were put in the cellar the next Winter, and planted out the following Spring, but he was surprised to find the blooms had changed color, and now he can hardly find one like the original in the whole collection. He wishes to know whether others have found the same trouble.

Flower Seeds from Colorado, which have failed, were probably killed with kindness and too much water, says J. B. W.

Bladder Nut (*Staphylea trifolia*), is the name of the shrub sent by R. B. Griffith, Grand Isle Co., Vt. It is a native of the northern States, generally found in moist shady places. Its inflated capsules are quite showy.

Growing Plantsin Moss.—This is nowa-days put forth as something new; but we learn from Phil. Transac. Abridg., Vol. 10, p. 796, that it was done by C. Bonnet, of Geneva, in 1745. He grew successfully, wheat, barley, peas, pinks, daisies, tulips, and cuttings and layers of vines.

Double Crocus.—"Horticola." We have never seen it, but have read of such a thing. Clusius, an old author, speaks of the "crocus, vernus, latifolius, flavo-vario flore duplici, the double cloth of gold crocus." Sabine says that some consider this only a sport, but he is satisfied that the double-flowering bulb has appeared. In the *Hortus Floridus*, we find two crocuses figured, one of which is described: "crocus pleno aureo flore striato." When we are so lucky as to find two double crocuses, "Horticola" shall have one of them.

What ails my Verbenas?—"Jennie," of Brooklyn. We can not tell you positively without knowing more about the case. In some places, verbenas suffer from a species of mildew or rust; in others, from minute insects. We suspect *your* trouble arises from setting your plants in the same bed every year. Experience shows that they will thrive best in soils renewed every second year. Let the soil be light and poor, rather than heavy and rich.

The Botanist Douglass.—"Amateur" inquires from whom the fine spruce-fir, *Abies Douglassii*, was named? It was from Mr. Douglass, the botanist and indefatigable plant collector. He traversed many portions of the world in search of new trees, plants and seeds. It is even said that he has enriched England with more varieties than any other traveler. We are indebted to him, among other things, for a fine Spirea, for the elegant Clarkia, different species of Pentstemons, Lupins, Œnotheras, Gesnerias, Ribeses, the Spruce already named, also Pinus Lambertiana, Pinus Douglassii, etc., etc. He traveled up and down our Pacific coast, in South America, and in the Sandwich Islands. It was in the latter country that he met his death, and that in a most melancholy way. In roaming among the mountains he fell into one of the pits dug by the natives for the purpose of catching wild bulls. One of these animals was in the pit when he fell into it, and gored him so dreadfully as to cause his death.

Egg Plant Made Palatable.—We have just learned to eat egg plant with pleasure, and perhaps now it is more the fixings than the plant itself. It certainly tastes well cooked thus: Cut in thin slices; dip these in (hen's) egg beaten; sprinkle on powdered cracker, and fry with as little grease as possible.—After eating them awhile in this very palatable form, we may come to like them pure and simple.

The Largest Cheese.—W. Whitford, alluding to the cheese spoken of in the September *Agriculturist*, says it was probably the one made in Cheshire, Mass., and sent to Thos. Jefferson, while he was President of the United States, 61 years ago. Mr. W., who by the way is now 81 years of age, recollects the cheese well, as it was pressed in his uncle's cider mill; it was four feet in diameter, and weighed 1,300 pounds.

A Large Cheese.—It is reported that a dairy firm, Messrs. Steele & Bro., owning seven hundred cows, near San Francisco, Cal., made a cheese weighing 1,779 lbs., which sold for 25 cts. per pound in San Francisco, amounting to the round sum of $444.75!

Metheglin.—E. S. Locke, Warren Co., Ohio. Metheglin is honey and water boiled and fermented, and sometimes flavored with spices. We do not know the particulars for making it, and find nothing in the cooks.

Red Ants in the House.—G. Bassler, Butler Co., Pa. Another subscriber says he has "well nigh exterminated these rebels by persistent efforts in feeding fresh meat followed by hot water baths, scalding whole regiments at once." Dishes of sweetened water set in different parts of the house will assist in their destruction. Sponges baited with sugar become filled with them, when they may be scalded out in hot water.

Coffee.—Mrs. J. Shirk, of Parke Co., Ind. The coffee of commerce will not grow at the north, except in glass-houses. The Illinois kind you speak of is bogus—it is only a sort of *pea*. We paid 2c. each for 50 kernels sent by mail, just to prove what we suspected, viz.: that they were the "chick pea."

"Turn to the Left."—Dr. J. S. Shimer, Lehigh Co., Pa., accounts for the rule in this country, requiring teams to turn to the right, as follows: When heavy four and six horse teams were chiefly used, the driver either rode the saddle horse or walked beside him on the left side. This would make it more convenient for him to keep to the right, in order to avoid collision. He says that drivers of two horse teams almost universally occupy the left of the seat, and hence can better turn to the right.—In N. Y. State the custom of drivers is the reverse; they sit on the right hand, but continue to turn to the right. Either the seat, or the direction of turning should be changed.

Steam Fire-Engines.—These are rapidly superseding the hand-engines, both in this and other cities. At a large fire, within two blocks of the *Agriculturist* Office, we noticed six steam-engines throwing their powerful streams into the fifth and sixth story windows. The fire was kept from spreading beyond three or four buildings where it originated, which could not have been done with the hand-engines. One who has worked at the brakes of a hand-engine until nearly exhausted could not but look upon these muscle-saving machines with a feeling of relief as, hour by hour, under a broiling sun, they poured enormous streams of water without cessation into the burning buildings.

Origin of Fires in New-York.—From the Fire Marshal's report, we find that for the six months ending first of June, there were 185 fires in this city, the principal of which were caused by the following, viz: defective stoves and pipes, 25; gas leakages, and gas in windows igniting curtains or goods, 21; carelessness with lights, 20; sparks on roofs, 11; defective chimney flues, 10; grates, fire places, and fire boards, 9; furnaces, 8; children playing with fire or lights, 8; intoxication, matches, steam boilers, and hot-air registers, 6 each.

Dried Fruit for Soldiers.

This matter, first proposed in the *American Agriculturist*, last month, is meeting with a general response. The subject was laid before the Sanitary Commission at Washington, and Secretary Olmstead immediately telegraphed, not only here, but to the press of the country generally, that dried fruits would be most acceptable, and, that too many could not be provided. Imagine the home table spread three times a day with nothing but soldiers' rations, (mainly bread and meat), and every one can judge how acceptable would be a dish of dried apples, or peaches, even if stewed in water only. Most camps are supplied with sugar, however. We repeat, that all parcels sent to the office of the *American Agriculturist*, will be forwarded hence without further expense. Mr. Lilienthal, who has an immense tobacco manufactory, generously volunteers to detail a sufficient number of his employees to repack all fruit sent here, to do all the necessary carting, and to provide for the expense of forwarding from this city to Washington and other points. As a general rule, however, it may be well to send fruit direct to some favorite regiment. The Express Companies will carry such parcels cheaply. Any surplus, after providing for your own regiments, please forward for those soldiers who have no country fruit-growing friends to look out for them. Let the fruit be well dried, so that it will keep well (but do not crisp it by the fire). Probably it will keep best in small bags or parcels, packing these into large bags or barrels for transportation. Let the "paring bees," and the evening home circles employ many active hands in preparing dried fruit for the noble soldiers.

P. S.—Since the above was put in type, Mr. Lilienthal has called to say that he has extensive lofts, suitable for drying apples by steam heat, with a large number of employees whom he can set to work, and he will be happy to prepare and dry, at his own expense, any surplus fruit which others are willing to contribute, and which they cannot attend to themselves before it would decay. We trust that this proposition will be freely responded to, and that a very large amount may be contributed. We know Mr. L. to be the man to carry out anything he undertakes. Those sending fruit will, of course, deliver it here free of expense for freight and cartage. Better send it direct to his principal office, No. 217 Washington-street, (west of the City Hall.) Acknowledgment of all fruit received will be made to the senders.—It is proper to state that Mr. L. requested that his name might not appear in this matter, but to have it done privately, or through the *Agriculturist* Office. We thought it necessary, however, to the success of the enterprise, to state who is at the head of it. Were we at liberty to do so, we could tell of very large contributions for the comfort of the soldiers, made by Mr. L. since the war commenced. We only refer to the matter, in this connection, to incite others to co-operate with him in this well-timed endeavor to contribute to the pleasure of those who are so nobly fighting our battles for us.

Notes on the Breadstuff Markets.

Columns of figures are not usually very interesting reading, but the condensed tables and the list of prices current now and one month ago, given in the Market Review of the *American Agriculturist* (page 347) will attract the attention of farmers, and even of the general reader. In table 1, it will be seen that the *receipts* of wheat for 23 business days, ending October 18, amounted to 5,079,000 bushels, against 3,270,000 bushels for the 26 previous days; or allowing 215,000 bushels for the less receipts of flour, the increase is still equivalent to more than a million and a half bushels of wheat, with one day's less transactions. The increased receipts of corn, barley and oats are correspondingly large. The *sales* of wheat have been over a million bushels greater, and of flour twenty eight thousand barrels greater. The *exports* of breadstuffs for three years, given in table 3, are the most important features of the market. It will be seen that unprecedently large as they were last year, they have been still greater during the first 9¼ months of this year. During that period this year, we *exported* from this city: of wheat, 19,097,373 bushels; last year 18,642,887 bushels; and the previous year only 8,101,018 bushels. Of flour, we exported this year 2,436,328 barrels; last year 2,121,403 barrels; and the previous year 1,340,981 barrels. Of corn we exported this year 9,228,402 bushels; last year 9,380,595 bushels; the previous year only 2,170,894 bushels. Of rye, we exported this year 1,060,018 bushels; last year 501,795 bushels, and the previous year barely 450 bushels. These figures, and the fact that the export demand at this moment is as great as ever, confirms what we have insisted upon for some time past, viz.: that there is again this year a material deficiency in the cereal crops of Great Britain and the rest of Europe. In the London journals, up to the harvest season, and in our conversations with the leading dealers of that city, it was constantly held out that their greater area of growing wheat, and the constantly *expected* favorable weather, would give them at least an average crop. Our personal observation of the actual condition of the growing grain, and information from many private sources, led us decidedly to the contrary opinion, as we informed our readers at the time.

The table of prices current now, and a month ago, show a very large advance in wheat and flour, and considerable advance in corn. Thus: State flour has risen from an average of $5.40 per barrel last month, to an average now of $6.65—equivalent to an advance of over twenty three per cent. Other brands have similarly advanced. All brands of white wheat have risen from an average of $1.44 per bushel to an average of $1.55. All kinds of red wheat, from an average of $1.20 to an average of $1.33½ per bushel. Corn (mixed) from an average of 57 cents to an average of 64½ cents. The benefit to farmers of the increase in exports, and the advance in prices is discussed elsewhere.

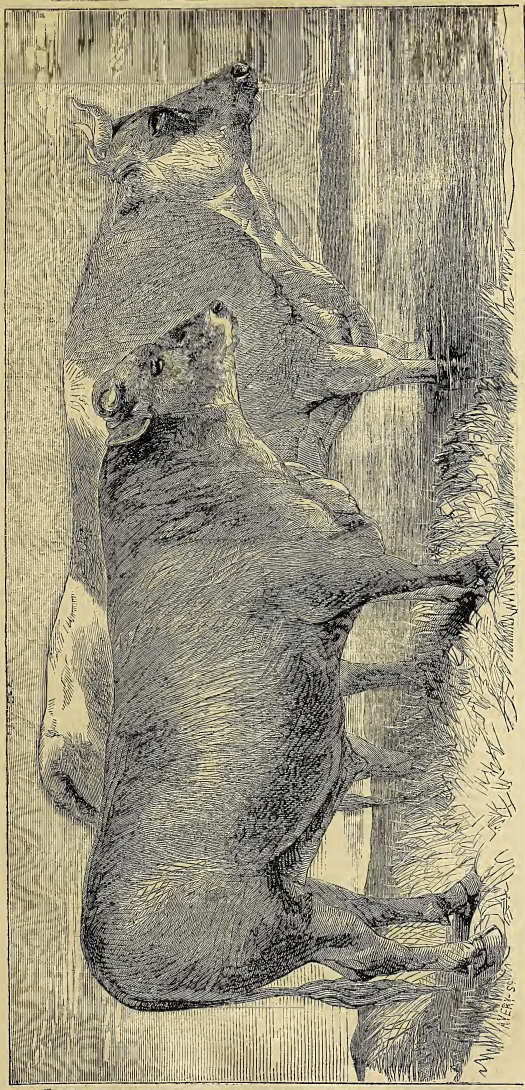
The Rise in the Value of Gold, and its Effects upon Farmers.

One of the marked events of the month is the rise in the value of gold, as compared with the legal tender currency of the country. At the time of this writing, gold is quoted at $132—that is, $100 in American gold coin will buy $132 of bank notes, or United States Treasury Notes, either of which pass current in trade or in the payment of debts at their par value. Any one having $100 in gold can buy 100 bushels of wheat of a grade quoted in the market at $1.32 per bushel. Or, *vice versa*, a farmer having 100 bushels of wheat which in a foreign market would buy only $100 in gold and enough more to pay the expenses and profits of export, can sell it for $132 of a currency that will pay his debts to the merchant, or on his farm. Again, suppose a London grain dealer, whose purchases are on the gold basis, desires to procure 10,000 bushels of first grade wheat. In his own country or elsewhere in Europe, he must pay, say $1.50 per bushel, or $15,000. The same grade of wheat is quoted in New-York at, say $1.60 per bushel. Add 20 cents per bushel for freight, insurance, and other expenses, and the 10,000 bushels of wheat would cost him delivered in London $1.80 per bushel, or $18,000 in all. But his $15,000 sent in gold, or laid out in exchange, would buy in New-York $19,800 of the par currency, from which he could pay $18.000 for the 10,000 bushels of wheat at $1.60 per bushel and $2,000 for expenses, and yet save $1,800. The same reasoning applies to other articles of export—flour, corn, provisions, etc.

These figures, though not representing exactly the actual difference in prices, are a fair illustration of the effects upon our breadstuffs and provision markets, of the recent rise in the value of gold as compared with the legal currency of this country. The exporting of grain and provisions has been greatly stimulated, and shipments abroad have gone up to unprecedented figures, as detailed in another article.

We are not discussing the advantage or the disadvantage of this disturbance of the currency of the country. The country at large is not any richer because a hundred million bushels of wheat are represented by a hundred and thirty two million dollars of legal currency instead of one hundred million gold dollars, for the real value of the two are the same. The particular point we are here aiming at, is, to show that this great advance in gold is inuring to the special benefit of farmers, even doubly so. *First*, it has created a greater foreign demand for our produce, as illustrated above, thus enlarging the market as well as increasing the prices. *Second*, the greater prices Farmers receive for their grain, butter, meat, etc., though not in gold, are in a currency that is a legal and acceptable tender in the payment of their debts to merchants, their land debts, etc. The nominal rise during the past month, of 10 to 20 cents per bushel in wheat, of $1.20 to $1.30 per barrel in flour, of 8 cents per bushel in corn, of 2 to 4 cents per bushel in oats, of 4 cents per pound in butter, etc., is so much clear gain to farmers, in the payment of debts previously contracted. But the rise in articles which farmers must buy, is nearly equal to the advance in what they have to sell, and more, on some articles. (The price of the *American Agriculturist* is about the only thing that has not gone up lately.) The advance in sugar, coffee, cotton and other cloths, however, is due more to the high tariff, taxes, and other causes growing out of the war, than to the advance in gold, and nearly the same prices would have prevailed had not farm products gone upward. It is evident, therefore, that however unfavorably others may be affected by the present disturbance in the currency of the country, farmers are clearly the gainers.

The practical lesson we would impress upon farmers is, that they should improve the present opportunity to pay off their liabilities, and get upon safe ground. Because their products can be sold at higher figures than formerly, they should not increase their outlay by more expensive living, by running in debt for dress or carriages, or for more land. Debts contracted now, may have to be paid when money is of comparatively greater value—when a bushel of grain, or a pound of butter will buy much less money. Better take in sail, and be ready for any storm that may suddenly come. Stick to the old coat, and hat, and carriage. A cheaper dress will suffice for a year or two. Patch up the old dwelling, it will keep the family comfortable a year or two longer. Put in a few extra acres, or rather provide for better cultivation of those already planned for. The inflation of the currency *may* continue a year or two yet, in which case products will continue to yield large nominal returns in the market. When they fall, you will need the more of them to sell. A financial pressure must come, when values return to the gold standard. The change may be gradual and extend over years, and not all at once, in a crash and smash. The farmer who is then out of debt, and can raise from his own soil crops enough to supply his actual necessities—his bread and home-produced clothing—will be able to look out serenely upon the financial storm around him. The summing up of our discourse is: Now is the time for farmers to get out and keep out of DEBT.



SWISS CATTLE.—PRIZE ANIMALS AT THE ROYAL AGRICULTURAL SOCIETY'S SHOW, LONDON, JUNE, 1863
(Engraved for the American Agriculturist.)

Swiss Cattle.

The annexed engraving is designed to represent two Prize Animals we saw on Exhibition at the late show of the English Royal Agricultural Society. The artist has hardly done the animals justice. These improved Swiss Cattle somewhat resemble the Short-Horns, though rather larger boned, and not yet fully developed in some of the "points." Intelligent Swiss breeders are making constant improvements however, and several experienced men with whom we conversed, both in Switzerland and Germany, consider them, in their present condition, as better adapted to Switzerland, and to Central Europe generally, than any of the breeds so highly esteemed in England. Prof. Rau, of the Hohenheim Agricultural College, Wurtemberg, has a large herd of pure Swiss Cattle, which he is breeding for dissemination in that kingdom, as he considers them best adapted to that country. The pure-bred Swiss cattle are of large size, medium boned, hardy, and will thrive on pastures too poor for the Short-Horn. They are good milkers withal, and we are not certain that they would not be found admirably adapted to many parts of this country. We threw out this hint to Mr. Thorne, and other public-spirited breeders, who have already done so much for the improvement of our stock. We may add, by the way, that at the Battersea Park Show the Swiss cattle attracted more attention from the curious multitude, than any other class of animals—except perhaps a pen of shaggy ponies, direct from Shetland. Each Swiss cow was supplied with a *large* sweet-toned bell, such as is worn by every cow in their native land. Nothing among Switzerland scenery was more interesting to us than to listen to the sound of these bells, heard upon the mountain sides at the distance of two or three miles, on a still evening.

Milch Cows in Fall and Winter.

Milking, except for a short period after the birth of a calf, is altogether an artificial process. Nature intended animals to yield milk only while it should be necessary for the sustenance of the young; but by long training, artificial habits have been induced, and the flow of milk is prolonged for months, and even for years, after the natural period has passed. Partly for this reason, no secretion of the cow is more easily affected by treatment of the animal. Any derangement of health, insufficient food, or bodily discomfort, at once shows its effects in the decreased quantity and quality of the milk. It should also be borne in mind that the continued flow of milk beyond the natural period is no small drain upon the vital functions of an animal, and this should be counterbalanced by extra stimulus in the form of good nourishing food, and whatever care is necessary to keep up the health of the cow to the highest standard.

At this season of the year change of food is necessary. Long before the pastures are entirely despoiled of verdure, the grasses nipped by repeated frosts lose much of their nutriment. Though cows may gather their fill, it is of poorer quality, and the yield of milk speedily suffers. A daily allowance of bran, shorts, or ground feed of rye and oats, or two thirds oats with one third corn, will supply the lack of nourishment, and show itself, with good interest added, in the milk pail. This feed should be wet before using. We prefer it to feeding with hay, for the reason that nourishment, more than bulk, is needed; they can pick up enough part-

ly withered grass to fill their stomachs. This extra allowance should not be delayed until the animal is suffering from insufficient food. It is far easier to keep a cow in good condition, than to bring her up after falling off.

Pumpkins are usually fed out first, upon failure of the pastures. If it be practicable to keep them uninjured until later in the season, it would be better. They come in best when dry hay and stalks are the staple diet, and something more succulent is craved and needed. It is best to remove seeds from pumpkins; they are an active diuretic, and many believe that they divert to urine fluids which would form milk.

Any person who has been long confined to a single article or two of food, say to salt beef and potatoes, knows how the appetite craves a change. The greediness with which cows lay hold of turnips, mangel wurzels, or other roots in Winter, proves that they, too, relish variety, and in the case of healthy animals, appetite is a safe guide in the selection of food. Even if roots were lacking in nutriment, an occasional allowance of them to cattle would be beneficial.

Observe strict regularity in the time of feeding. If meals are regularly served, animals will patiently wait the appointed time; otherwise, they will be restless and uneasy while looking for supplies, and ravenous when fed.

The importance of comfortable, well ventilated shelter for milch cows is yet greatly underrated, despite all that has been written and said. A large part of the food eaten is consumed in furnishing warmth to the animal. Thus, good shelter is equivalent to a large percentage of food. Besides the actual loss of food from the increased amount required under exposure to cold, there is further loss in milk from the feeling of discomfort. The secretions are always disturbed by influences that cause pain or uneasiness, and every shiver of a half-frozen cow will make itself visible in the milk pail.

In their anxiety to secure warmth, many have overlooked the importance of pure air. Close, crowded stables, reeking with odors from accumulating manure, produce feverish restlessness in the cows, and the flow of milk suffers. At best, confinement during the winter months is irksome to animals, and kindness to brutes, as well as profit, demands that everything practicable should be done to secure their comfort.

For the American Agriculturist.

Feed for Farm Horses.

When I was a boy in the north of Vermont, we used to feed dry hay and oats, unless the horse had the heaves, which was very common among them at that time, owing to feeding too much dry hay and oats, and driving too fast when full. We then supposed they ought to have hay before them all the time. This is a false idea; all kinds of animals will do better on regular meals. Farmers usually feed too much dry hay. You may keep a horse eating all the time and not have it thrive. I came to Massachusetts about 12 years ago, and was engaged in the teaming business about 7 years. I began to feed cut hay and corn meal, and found the horses would do more work and last longer, and be in better condition than when kept on dry feed. Cracked corn and oats make a very good feed for noon, when in a hurry. I would feed carrots all winter in small quantities, especially to young horses and breeding mares. This keeps them in a healthy condition. Team horses may be fed on them once each day to advantage. I am not able to state the amount each horse should be fed: this depends on the size and age of the animal. I would advise all owners to keep their horses, especially those they use, in good condition; it costs less in the end. Colts ought not to have much grain, unless very thin in flesh; they are often injured by graining. A few ground oats, with cut hay or straw wet and mixed, and half a pint of ashes added once in two or three weeks, is all colts need besides hay. The ashes keep the bowels open, and, it is said, free from worms. If living in Maine or Vermont where hay and oats are cheap, I would have the oats ground, and cut a portion of my hay and straw to mix with what grain I fed, and consider myself well paid for the time and trouble. W. R. LEWIS.

Milford, Mass.

Keep Sheep.

Perhaps this counsel is supererogatory just at this time. All wool-growers and their neighbors are fully aware that at present prices, few if any other branches of agricultural industry are more remunerative. The unprecedented demand for woolen goods consequent upon the necessities of the immense armies now in the field and being raised, is still further enhanced by the scarcity of cotton, which brings woolen fabrics into more general use. How long this exceptional state of things may continue, it is impossible to predict with certainty, but there is good reason to suppose that even if the long-wished for peace should be proclaimed within the next six months, the demand for woolens will almost certainly be such as to give a paying return for investment in sheep. One fact alone speaks volumes in favor of sheep-raising. There has been imported into the United States from foreign countries, wool and woolen goods to the average amount of $35,000,000 to $45,000,000 for the last three years, equivalent to the yield of at least 13,000,000 sheep. It is stated by Daniel Needham, Secretary of the Vermont Wool-Growers' Convention, that the average annual increase of population in this country requires the wool of 3,000,000 sheep. If these figures be only approximately correct, they demonstrate the slight danger of an overstock of sheep for many years to come. The present and prospective high tariff will keep up the price of American-grown wool to much higher figures than have prevailed hitherto.

The scarcity of mutton has, as would be expected, been aggravated by the rise in wool. We say aggravated, because year by year before the breaking out of the war, it had been more and more difficult to procure a supply of good mutton at reasonable prices. At present this article is one of the luxuries. Very wisely, few care to sell when prospects for keeping are so good. Even if the wool market should return to its ordinary level, or below it, there is abundant encouragement for sheep-raising.

Of course, each must be governed by the circumstances of his locality, both in deciding to invest in sheep, and also as to the best breeds. Thus, the average cost per head, per annum, of keeping sheep, is estimated as follows: In Illinois, 60 cents; Iowa, 75c.; Michigan, 83c.; Virginia, 60c.; New-Jersey, 60c.; Pennsylvania, 50c.; Maine, $1; California, 75c.; Vermont, $1.30.

In Vermont, after trying almost every breed, the majority of wool-growers give the preference to the Spanish Merino, as yielding the largest return for wool. Where mutton is the principal object, as in the vicinity of large cities, larger middle-wooled breeds, like the Southdown, are preferable. The latter breed probably combine the desiderata of both wool and mutton in a higher degree than any other raised in this country. With the additional security which the tax upon dogs will give, we may safely say the prospects of the sheep interest in this country are better than ever before. A word to the wise is sufficient.

A Good Breeding Ram.

In answer to the question, "What ram shall I choose?" a correspondent of the Mark Lane Express (England), writes, "Take care that in every case you select an animal of like contour of frame, *i. e.*: full and proportionate throughout. To be more minute: His head should be masculine, but denoting kindliness; his neck full and of fair length—not a thick, short, bull-neck, but kind and graceful; his shoulders, chine, and chest, all wide and full in form, the chine joining nicely to the neck, the breast end out, the brisket wide and fat; the ribs well springing and nicely arched; the back and loin level and broad, and fully covered with firm fat and muscle; the hips wide, rump rather long, but full, and not hanging; dock thick and fat; twist wide and well filled; purse well hung, and covered, not too long nor large; legs and flanks thick and full; offal fine but not light; wool good in quality, and as much of it as can be got. The breeder that obtains all these points in perfection is worthy of all credit; but be that as it may, he must seek to obtain them in as great a degree as possible; of course, the more of these valuable points he gets, the better."

For the American Agriculturist.

Rearing and Fattening Hogs.

BY SAMUEL BERRIMAN, OF STAMFORD, C. W.

[The following article was submitted in competition for the prize, and though not awarded a premium, it contains too many practical hints to be left unpublished.—ED.]

The writer has been a breeder of hogs for the last twelve years. The breeds raised have been: Byfield, Suffolk, and improved Berkshire. I prefer the latter, after much experience, for the following reasons, viz.: They breed equally well with the others, fatten earlier, and command a higher price in the market. It is acknowledged that the cost of wintering hogs is one of the greatest difficulties in raising pork; hence a change of breed to one wherein the weight can be attained in half the time, and at two thirds the cost, will be a marked advantage.

The gain derived from raising and feeding improved hogs will readily be seen, when it is borne in mind that the weight usually attained by common hogs kept over winter, is not greater than the ten months improved breeds. Again, for example, what will be the gain in weight on the first day of May, of a four-month's hog weighing sixty to seventy pounds on the first day of December previous, fed and cared for in the ordinary way? This question I have put to many farmers, most of whom admit that such gain is small; others say that such hogs will do well, if they hold their own during the winter. Now if this gain in weight is so small, what is the cost of such gain, or of holding their own?

It would be far better to save the food used in winter, and apply it towards the fattening of Spring pigs early in the Fall. I keep none but breeding sows during Winter. My practice is, to have my sows come in as near the middle of February as possible. The sows and pigs are kept in a warm, comfortable sty, well protected from the prevailing winds. The sow is supplied

with as much corn meal, mixed with skimmed milk or dishwashings, as she can consume during the time the pigs remain with her. The young pigs remain with the sow eight weeks, when the sow is removed and runs at large. The pigs are fed with skimmed milk and dry corn meal, in separate troughs, until there is a good covering of clover on the ground, when they are put into pasture, and the milk and meal gradually reduced. After about a month they will be quite able to live and thrive under the same treatment as the older ones—that is to say, clover as the staple article of food, with such a supply of skimmed milk and dishwashings as the house may afford.

The sows are allowed to have another litter during Summer, which are either used in the family as roasters, or sold for store hogs. Early in September the hogs are taken up and put into pens—say about six in each; potatoes and other vegetables are steamed and mixed with the skimmed milk, etc., from the house, along with a small quantity of ground screenings of grain, or ground barley, and fed three times a day. This course is continued about six weeks; the quantity of ground barley or screenings is then gradually increased, and the steamed potatoes and vegetables decreased until the middle of November, when corn meal, mixed with such a quantity of skimmed milk or dishwashings as may be necessary to make it moderately moist, is substituted until the middle of December, at which time the hogs are slaughtered. In this way hogs are brought to weigh over three hundred pounds at the age of about ten months.

The hams and shoulders are then cured thus: A mixture of one fourth brown sugar to three fourths dry salt is made; the hams and shoulders being placed in a large salting tub (water and brine proof), the skin side downwards, are then covered with the above mixture of salt and sugar, say a third of an inch thick, a little salt and sugar being applied from time to time on such portions of the meat as become uncovered by the formation of brine—particular care being taken to keep the meat well covered near the bone. The hams and shoulders from hogs of about three hundred pounds require to remain in the tub under this treatment, about three weeks. They are then hung up in a dry room, for a week, afterward put into the smoke house and smoked with corn cobs for a month. They are then sewed in cottou bags and lime-washed. Thus secured, there is no difficulty in their keeping good for twelve months. Hams and shoulders cured as above, are always saleable at top prices for family use. No distant market is necessary, the demand of the immediate neighborhood being always greater than the supply.

In regard to the side meat, the first care is to have clean, sweet barrels. Each side being cut into three pieces, is packed thus: the bottom of the barrel is covered with salt about an inch thick; the flesh side of the pork is then covered with a thin coat of salt and packed as closely as possible in the barrel; between each layer of meat about half an inch of salt is applied. When filled, the top receives a similar coat of half an inch of salt, and the barrel is then headed up. Meat thus cured from hogs fatted as described, brings a full price here, and is always saleable.

Pigs dropped about the middle of February, will be ready to take off from the sow about the time when most cows are coming in, and the farmer is thus enabled to give them a plentiful supply of milk. They are fat when taken from the sow and thus are kept fat. The meat while heavy, is young and tender, and a preference is always given to such pork in every market.

Query.—Is it profitable to raise hogs in any of the Eastern or middle States?

For the American Agriculturist.

Will it Pay to Winter Turkies.

The great seasons for the sale of poultry are Thanksgiving and Christmas, and then the market is abundantly supplied, and prices rule low. Farmers are anxious to sell their fowls to get rid of the expense of keeping them through the Winter, when their appetites are ravenous, and the corn and boiled potatoes disappear rapidly. It is clear it will cost something to keep them; it may not be so clear that it will pay. A little transaction of my own, last Wiuter, may throw some light upon this question. I bought a flock of twelve turkeys—the mother bird, and eleven young ones—the last of August, the average live weight of the young being about two pounds apiece. They were killed along as wanted in the family from November to March, and the monthly gain in weight was about two pounds and a half for the hens, and three pounds for the gobblers. They gained quite as much in Winter, as in the Fall, living upon corn, oats, boiled potatoes, and having access to the pigs' troughs. The number of males was six, and the weight of the mother ten pounds. The market price of turkeys was eight cents, in November, and thirteen in February. Had they all been killed November 1st, they would have weighed about 93 pounds, and come to $7.44. Had they all been kept to the 1st of March, they would have weighed about 215 pounds, and come to $27.95. The double gain, in weight and price, is an important consideration. The gain in weight was more rapid than I had supposed, before applying the steelyards.

The experiment furnishes a useful hint to farmers, and to villagers. If prices are not satisfactory, it will pay to hold on, and keep feeding poultry. The growth, and the increased price, in mid-winter and Spring, will pay for feed and leave a handsome profit, I think.

I find it difficult to raise turkeys, on account of my own and my neighbors' gardens. But the garden is out of the way by the 1st of September, and a late brood of turkeys bought of a farmer, will do no damage. They are about as easily managed as a hen and chickens, and give a great deal of satisfaction, where there is room for them. They are beautiful to look at while growing, and they make roast turkey cheap and easy to a good many who do not know exactly how to pay the common market price for the luxury. This is an item of household economy worth looking at by those who have only an acre or two of land. So thinks JONATHAN.

For the American Agriculturist.

Saw-Dust for Stables.

One of the papers reports Dr. Dadd as objecting to the use of dry saw-dust as a litter for stabled horses, on the ground that it absorbs the natural and healthy moisture from the hoof, and renders it brittle and dry, and so leads on to cracked and contracted feet, to corns and similar diseases. I had supposed this "eminent veterinarian" too sensible to hold such an opinion.

If the pores of a horse's foot were open and coarse, say like a piece of sugar or a sponge, the saw-dust might absorb moisture from them injuriously. If I lay a sponge on my hand, it does not take up its moisture. If I spread saw-dust on my hand, it will absorb whatever perspiration or other wetness there may be on the skin, but it will do nothing more. So saw-dust will take up whatever liquid manure there may chance to be on the floor of the stable, but it will not suck moisture out of the horse's hoofs. In my own practice, I have long used saw-dust to keep the horses' feet moist, though I do not, for this purpose, use the dust in a *dry* state. I spread it over the entire floor, two inches thick, sprinkling that which is under the fore feet with water, just enough to keep it moist. The dust under the hind feet gets moistened in other ways. By this means the hoof is kept soft and moist, almost as much so as if the animal were running at large in a pasture. Of the valuable liquid manure saved in this way, I need not now speak. EXPERIENCE.

It Pays to take Care of Implements.

There is danger lest, in the hurry of work, tools large and small, will be exposed to rain and sun. When so neglected, great harm is done them. The wood-work shrinks, and cracks, and rots, and the iron work rusts and is liable to break. Such implements are disagreeable to work with, and they are continually going to decay. We believe it would be a saving of money, in the long run, to take time, even in the busiest seasons, to clean and house daily all implements of the farm and the garden.

The proper care of tools involves the painting of those which are ever exposed to the weather, such as carts, sleds, wagons, horse-rakes, etc. This may seem a trifling matter to some careless farmers, but it is one of great consequence. We wish to cite the testimony of a practical man, in the Rural New-Yorker, which is right to the point. He says: "I had a sled made in the fall of 1834, at a cost of $19.00. I have the same sled now (1861) and will warrant it to carry as large a load as when it came out of the shop. With the exception of the shoes, which are getting very thin, it seems as perfect as when new. I have not paid out fifty cents in repairs, except for painting. It has been painted twice during this time, and has not staid out doors ten nights during the whole time. In the fall of 1858, I exhibited this sled and one double wagon that had been used eight years, one hoe that had been in use 20 years, without even a new handle, and one pitch-fork that had been in use 15 years without even a new handle, at the Adams' Agricultural Fair. I did not expect a premium, but was awarded a discretionary premium. The committee on Tools pronounced them as good as new, with the exception of natural wear."

A premium wisely bestowed. And here let us repeat an important item, more than once stated in the columns of the *American Agriculturist:* A mixture of three parts lard and one of resin, melted together, is one of the best coatings for all steel or iron implements. The lard makes the resin soft, while the latter is a sure preventive against rusting. The mixture is good for plows, hoes, axes, indeed for *all* tools and implements, as well as for knives and forks packed away. The coating can be very thin.

FARMING IN AUSTRALIA.—A traveler writes to one of our papers that mahogany trees are abundant on the Swan River; that farmers are clearing up the land, and putting in crops of wheat, oats, etc., and that "the government is making roads and good *mahogany bridges!*" He adds that they have very little thunder there, and that Kangaroo flesh is abundant. Do any of our enterprising farmers wish to migrate?

Mammoth Millet.

The accompanying engraving is an exact sketch of one of a cluster of millet heads now on exhibition at the office of the *American Agriculturist.* There are larger heads, but this one is the largest we could get into our columns. The straw, including head, is 6 to 6½ feet high, strong and full of leaves, which supply a good deal of forage. The artist has not attempted to exhibit the multitude of seeds which crowd each other upon the closely clustering panicles. By counting the seeds on some of these, and estimating for the rest, we find the average number on a single head about 25,000! These samples were presented by Wm. Fullerton, Esq., of this city, who has it growing in considerable quantity at his farm near Newburgh, N. Y. He uses both the ground seed and the straw for cattle feed; both are relished, and produce good results. It thrives most luxuriantly on a bog meadow thoroughly drained. It grows slowly, and should be sowed on freshly harrowed land in good condition, so that the seeds may start at once and get ahead of the weeds. Mr. F. esteems it as one of the most profitable crops. We are happy to state that Mr. Fullerton has promised us all the seed he can spare, to be distributed among our subscribers the coming Winter.

Experience with Hungarian Millet.

J. H. Wright, of Cook Co., Ill., writes to the *American Agriculturist*: In June 1861, I harrowed 18 acres of prairie sod, until it was perfectly mellow, and sowed ½ bushel of seed per acre; then harrowed again and rolled, which I consider a very important item. I also sowed 8 acres of old land, finishing July 5th. The millet was ready for the machine September 1st, but owing to wet weather, was delayed for about three weeks, when the seed was ripe. I stacked one hundred and ten loads, estimated at eighty tuns. After having fed one third of it, I thrashed the remainder, which yielded me four hundred and fifty bushels of seed, weighing fifty six lbs. per bushel. My stock do well on the thrashed straw. The seed, being small and hard, is very difficult of digestion, and I think must injure cattle or horses if fed exclusively on it for any length of time. I should, if possible, cut it while green, when I consider it superior to any forage crop I ever raised. It will thrive on any *good* soil, and suffers but little from drouth. If well put in, it is a very sure crop. I should sow another year as soon as June 15th. I think it would be excellent for feeding green to cows in Summer.

Sorghum Culture and Manufacture.

F. A. Denny writes to the *American Agriculturist:* My mode of planting sorghum is, to prepare and cultivate the ground the same as for corn. High hazel ground is the best here, although it will grow on almost any good corn land. Black prairie soil does not make as good syrup as other soil. Plant as early as the ground is sufficiently warm, and thin to five or six stalks to the hill, keeping free from grass and weeds, until large enough to plow. About the middle of September a majority of the seeds will have turned black, and the lower part of the blades will become yellow, when it will do to commence grinding. Most people strip the cane while standing, and cut the tops down to second joint. I pressed some without stripping, which turned out as well, and saved expense. For pressing I used a common two-horse three roller upright mill, rollers ten inches in diameter, twelve inches high. I also used one of Cook's Evaporators No. 2, placed on brick work, which does much better than the rocker, as it gives more heating surface. I placed a barrel under the mill to receive the juice, and at the lower end on the outside I put in a common wooden faucet, which conveyed the juice into a spout or tube, made by plowing out about an inch square groove in a piece of 1½ inch pine, 2½ inches wide, with a strip of weatherboard nailed on top to keep out dirt. The spout conveys the juice into a barrel set in the ground close to the evaporator. The tube was protected by a bridge laid down over where the horses crossed it. I placed extra hopper-shaped sides to my evaporator, to prevent the syrup from boiling over. I use a very hot fire, and boil as fast as possible, which throws up the scum better (and makes better syrup) until it is nearly done, when I let the fire cool down a little until it is run off. A little experience will soon teach when it is done.

Cook's evaporator regulates the flow of syrup so that I can run off just as much as is cooked enough. I let in the juice next the chimney, and let out the syrup at the front end over the fire, which I think is best, as I can control the fire to prevent burning the syrup when it is too hot. I used a small portion of lime as a neutralizer while the cane was green, but it makes the syrup dark. After the cane was ripe, rapid boiling and skimming alone made very superior, light colored syrup which kept well, and retailed at the mill at 50 cts. per gallon. Others here have made syrup by a different process and with kettles, but it has not kept well. Last Fall, with a man and boy, I made about 1,400 gallons. The cane did not yield near as well as previously.

Sugar from Corn Stalks.

H. A. Sheldon of Addison Co., Vt., writes to the *American Agriculturist:* I took two stalks of Stowell's Evergreen sweet corn, of average size, after the corn had been taken off, pressed them (to one joint above the top ear) between rollers half an inch apart, and obtaining five fluid ounces juice of specific gravity 1.066. Two grains quick lime were added, and the juice was boiled, strained, and evaporated to a trifle over half a fluid ounce of rich, transparent syrup. In a former experiment not weighed, it crystallized into good sugar. As I did not probably obtain more than half the juice; and allowing two square feet of land for each stalk, the result would be 66 gallons syrup, or 300 lbs. sugar to the acre. The flavor of both sugar and molasses is much pleasanter than that from sorghum.

For the American Agriculturist.

Quick Returns in Farming.

Perhaps in no calling is capital so slow in yielding its interest as in husbandry, pursued by the old methods. This accounts for the extreme reluctance with which gentlemen of the old school make their investments in improvements. If they invest in bank stock, they are reasonably sure of seeing dividends every six months. But in farming, it takes a long while for the money to come back again. A crop of wood must grow twenty years before it can be gathered. The same amount kept at interest would have a chance to double twice. A horse does not reach his maturity under five years, and a cow must be three years old before she begins to pay her way. We have to wait nine months for the harvest of the winter grains, and three or four for the Summer crops. A merchant changes his money often, sometimes handling his entire capital four times a year, and making a handsome profit each time. Every body seems to move faster and to get rich faster than the farmer.

There is truth in these statements to a certain extent. We can not have great permanence and security in our investments, with quick returns and large profits. Yet something can be done to make the farmer's sixpence nimble, while he lays his plans for twenty years ahead. He may get much quicker returns from some kinds of stock than from others. Poultry, pork, and sheep come to early maturity, and begin to pay the same season. The hen bought to-day, begins to lay eggs to-morrow, gives chickens in a month, which make good broilers in three months. The turkey's egg of to-day is a twenty pound gobbler in six months, worth two dollars. A litter of pigs of ten or more, is worth thirty dollars at two months old. A lamb at three months is worth three dollars. These animals all yield meat for family supplies the year round, and make the farmer nearly independent of the butcher. They keep the butcher constantly in his debt, and make the dollars as well as the sixpences rather nimble.

And then the dairy business need not be very slow in bringing money. Butter, of course, goes to market every week, and is everywhere a cash article. Cheese can go off once a month, and lighten the labors of the dairy woman, while it makes heavy the purse of her husband, if he have been so lucky as to marry a woman who knows how to make a cheese. If the milk is sold there is a daily disposal of the products, and returns come in weekly or monthly.

In grazing fat cattle the returns are less frequent, but it has the advantage of being a wholesale business. Cattle bought in Spring are sold in the Fall, and generally bring profit enough to keep one comfortable through the Winter.

In the management of manure, there might be much quicker returns, especially of fish and the concentrated fertilizers. The yard manure, which is generally a year in accumulating, might be spread upon meadows both in Spring and mid-summer, and bring crops within sixty days. This is an article that can not be safely hoarded. The roots of grasses will turn it into money right early. We have sometimes spread manure in May, and seen it double the crop of hay cut early in July. We have spread it in August, and made the aftermath luxuriant for cows all through September and October. There is a great advantage in having this flush feed late in the season. It makes a full flow of milk, and the butter and cheese are nearly equal to the products of June. By this process, the manure is turned into money in a very short time. Farmers upon the shore where fish are caught, have a great advantage in having manure always accessible. We have applied fresh fish in the hill to the growing corn late in June with the best results. Manure is quite too precious an article to have it remain idle in the yard.

AN EASTERN FARMER.

For the American Agriculturist.

When to Sell Potatoes.

It is full one half of farming to know when to sell products. With many of small means the temptation is strong to sell as soon as the crop is gathered. The hay, the grain, and roots go immediately from the field to market. It saves once handling and the peril of loss from fire, rot and other causes. This makes potatoes cheaper in the fall months than at any other season of the year. Every body who raises potatoes wants to sell. The merchant who is shrewd, buys frequently of the necessitous farmer, at thirty or forty cents, and sells in the Spring at wholesale for seventy-five or eighty cents.

Any one who will trouble himself to look over the prices current of potatoes in years past, will see that the price is from fifty to a hundred per cent. higher in March and April, than in November. Five per cent. will probably pay for storage and handling. Farmers generally have ample store room for all they raise, and they may as well share the profits of the merchant. If the crop is unsound, of course the sooner it is sold and consumed the better. If in good condition, it will generally pay for keeping until prices are remunerative. CONNECTICUT.

[This depends much upon circumstances. We think five per cent. will seldom pay for risk, to say nothing of expense of storing and handling. If a farmer has had successful experience in keeping potatoes, it is generally worth while to store them. Our own observation is, that the loss from rotting, shrinkage, mice, expense of storing, and interest, averages from 25 to 30 per cent., taking the country together, in which case it would be as well to sell at 30 cents per bushel in Autumn as at 40 cents in Spring. Still, somebody must keep them, and the skillful farmer may better make the profit than any one else, if he can safely do it.—ED.]

For the American Agriculturist.

Manuring without Manure.

It often happens that a farmer wishes to manure a field or two more than his dung heap will allow. It is sometimes the case, also, that he wishes to enrich a piece of ground lying at too great distance from his barn-yard for convenient hauling of manure. What shall he do? In reference to the first, we say, if you do not wish to meddle with patent fertilizers, use muck, if your farm contains a bed of it, or if you can get it with reasonable cost of labor and money. To prepare it for use, haul it out into the middle of the field, and mix it thoroughly with ashes or lime. One hundred bushels of hard wood ashes unleached will neutralize the acids of thirty cords of muck, and this will manure two acres of land. The ashes will cost from ten to fifteen cents a bushel, and the muck if bought will cost, perhaps, fifty cents a cord delivered on the field: if found on the farm it will cost only the time and labor of digging. If this compost is made up in the fall, let it be shoveled over once or twice before using in Spring.

When ashes are not conveniently at hand, lime may be used. Take fresh, unslaked lime, mixing at the rate of half a cord of muck to a bushel of lime. Add a bushel of salt to six bushels of lime, dissolved in water enough to slake the lime finely, preparing the lime only as fast as wanted, and spreading it on fresh in layers over the muck. The layers of muck may be about six inches thick. Spread on lime enough each time to thoroughly whiten the surface. Carry up the heap about six feet high, and as many wide, and make it as long as the amount of muck on hand will permit. In the course of a month, the muck will be well decomposed and sweetened, and may be shoveled over again and incorporated well together. Then it can be used whenever wanted, at the rate of fifteen cords, as required, to the acre. Supposing the lime to cost from twenty to thirty cents a bushel, this excellent compost can be prepared at the rate of from $8 to $10 to the acre.

For fields lying at a great distance from the barn, a manure of this sort, made on the ground, would be excellent. In the possible lack of muck, turfs from the fence-corners, forest-leaves, rotten logs, etc., might by turned to good account. Of course, if a load or two of some highly concentrated fertilizer, such as hen-dung, privy contents, etc., be carted out and mixed into the heap, it would add to its value. *

Shade a Fertilizer.

One holds that darkness favors the deposition of nitrate of potash, which is a fertilizer, in the soil. Another, that shade brings in the earth-worm, whose perambulations benefit the soil. Wherever there is a flat stone, or board, or heap of rubbish, thither comes the earth-worm. He is a regular sapper and miner, boring the ground for a foot deep, with a multitude of holes, and leaving behind in his exertions a compost which is quite enriching. He is a Jethro Tull, tilling and tilling the ground, and so fertilizing it with the gases of the atmosphere.

Mending our Ways.

The common practice of throwing up dirt, annually, from the sides of the road into the middle of the highway, is a *very* cheap and easy method of mending our roads, but a *very* poor one. For first, this provides no solid foundation for the track, and the covering is of the worst possible material for a road; it is better for the compost-heap than for the highway.

The first want of every road is a hard bottom of some kind. In many localities it may be composed of small cobble-stones, or of broken boulders, or coarse gravel, or the slag of furnaces—anything that will stand firm under heavy pressure, and which will afford drainage in wet weather. An excellent practice—perhaps the best—is to take off about six inches of earth from the middle of the track over a space at least twelve feet wide; lay a good frost proof drain along the middle; then cart in loose stones from the field, or the refuse of the quarries, enough to fill up this trench, putting the large, flattish ones at the bottom; break the others into fragments of convenient size with long-handled stone-hammers, and pound them down compactly together. Now draw on gravel, from two to three inches in depth, rounding the whole off smoothly. It is of the highest importance that the middle of the track should be several inches higher than the sides, so as readily to turn off the water which falls upon it. Finish the work by making shallow, saucer-

shaped ditches on each side of the road-way, to carry off the surface-water. Such a road will be durable, yet will need occasional repairs, which should not be neglected until the foundation is broken up. All that is needed, is an annual light dressing of gravel to fill up the ruts, and to keep the surface well rounded and smooth.

Where gravel does not abound, resort may be had to shale or slate-rock from the hill side, or the refuse of furnaces. But whatever material is used, let it never be forgotten that the one indispensable thing is, first to make a hard, firm bottom, and then to keep the surface well rounded and smooth, so as to shed water quickly into the gutters at the sides.

Roads on the hill-side are harder to manage than those on level ground. Here, too, the hard foundation is needful, and the rounded top. But in addition, there should be turn-outs, or water-breaks, every five or six rods, to turn off the water from the track; otherwise the road will soon be worn into deep gullies and spoiled. These, however, should not be so large as they are sometimes made—a foot in hight is enough, and they should be laid at such an angle that the water will quickly run into the side gutters.

The Great Bee-Master.

Translated from the German for the Amer. Agriculturist.

Crossing the River Oder from West to East, near the City of Brieg in Upper-Silesia, we are at once in the land of the "Wasser-Polaken," a Polish tribe under the dominion of Prussia. We must, however, wander about ten miles over a sandy plain and through gloomy pine groves, ere we reach the Polish village Carlsmarkt (Karlovizze). This little village with its small Catholic parsonage has been for about ten years the attraction of travelers from all parts of Europe, nay even from America, for here those improvements in bee-keeping began, which have raised this branch of agriculture to a hight, which it had never reached before.

The garden of the parsonage is well-stocked with hundreds of bee-hives of various forms, many of them of original designs, and the air is filled with thousands of humming bees. Among them, in a plain dressing gown, a little velvet cap on his head, walks a simple, active man, as quietly as if they were some of the blossoms that the morning breeze blows from the trees. The bees sit on his neck, back, breast and hands, even in the wide sleeves of his gown, yet this does not disturb him in the least. Here and there he takes them off gently and lets them fly, smiling quietly when some visitor takes fright from the bees, or shrieks when a bee stings him. He, himself, is seldom stung, and if it ever happens, he cares as little as if it were the bite of a musquito. His look is steadily fixed on the hives and its inmates who swarm around him. If his visitors ask him questions, his answers are rather short; one must know how to ask him interesting questions, to induce him to enter into a conversation. He who wishes to learn something about the management of the bees, must learn to see and observe for himself. This is the habit of the Bee-Master, whose countenance is so good-natured and simple, and yet not wanting in spirit, and who shows a certain reserve, or rather bashfulness, except when he forgets himself in his enthusiasm for his subject.

This man is Dzierzon, the pastor of the village. He is of Polish extraction, as his name shows, and knows the bees as if he were one of them, and has learned how to educate them. They must do what he will; if he want honey, they must make honey; if he want wax, they must make wax; if he want more bees, they must breed. This power he has attained by thoroughly learning the nature of the bee. According to their nature, he takes advantage of their instinct and faculties, avoiding everything which they dislike, protects them from their enemies, nurses them in their diseases, and renders, so to speak, their lives comfortable. And the consequence of all this is, they are able and willing to work for him in the way he chooses, to the utmost of their power, like the people of a kind-hearted manufacturer who cares for them like a father. One must have seen Dzierzon's continual care and watchfulness over his little pets to gain an idea of the "*Bee-Father comme il faut.*" He forgets nothing that must be done or changed at the hives, to protect them from rain or the burning sun, etc., and every bee which he sees exhausted, is taken up by him and carried to his home. On cold mornings he goes about with a little box, gathering the benumbed bees from the ground, and warms them by keeping the box on his body. His activity is thus not small, since he possesses other apiaries besides that at Carlsmarkt, and cares for all of them with equal tenderness. And he takes in hand also hammer and saw, auger and pincers, and repairs his hives as well as any artisan.

More than any other, Dzierzon possesses two qualities: judgment and power of observation. By them he has penetrated into the very mysterious life of the bee, deeper than any mortal before him. Nay, so minute have been his investigations, that scarcely any essential characteristics have remained undetected. He astonished the natural philosophers at his first appearance before the public with his discoveries, showing that the queen-bee is impregnated but once in her life, and that she is the only egg-laying bee in the hive. The more these two discoveries were doubted at first, the greater was Dzierzon's glory, when he proved the incontestible truth of the same, by that tribe of bees from Upper-Italy, which is of a yellowish color, and which Virgil made famous by song. Dzierzon introduced these bees into Germany in 1853 and the *yellow* queens from Italy produced, crossed with the *black* German drones, again and again *yellow* bees, while the *yellow* queen-bee born in Germany, according to the black drones with whom they lived, produced *black* or *blackish* bees.

Further trials founded upon this difference of color, gave full proof of the truth of Dzierzon's statement, so that it is no longer doubted, and Dzierzon stands before us as the greatest theoretical and practical bee-cultivator in the world. Before Dzierzon, the whole economy of bee-keeping, a few cases excepted, consisted in depriving the bees of as much honey as possible, which was naively styled "robbing." No one had formed an exact idea of their nature and disposition. Superstition thought it only necessary to tell the bees, when their master was dead, lest they should die themselves. The little creatures were left in those places in which they had been found in their wild state, i. e. hollow trees.

All this Dzierzon has thoroughly improved. He teaches the breeding and rearing of bees according to a regular plan. According to his method, one may be independent of the whims of the bees, can make use of their services at the right time and in the right way, can breed bees enough in a few years to fill hundreds of hives, and again arbitrarily lessen their multiplying and gain the more wax and honey, at pleasure.

"Mr. Smith, I wish to speak to you privately; Permit me to take you apart for a few moments." Smith—(who was not in the least frightened)—"certainly, my dear sir, if you'll promise to put me together again all right."

A Farmer's Experience in Kansas.

To the Editor of the American Agriculturist.

I emigrated here in the Spring of 1858, and was just in time to put in a good crop of late corn. The many different instructions in regard to breaking up prairie, induced me to experiment until I found the best method. The first year I broke about three inches deep, and in the fall I perceived that it did not '*rot*' as I had expected. Accordingly, the next year, '59, I broke two inches deep, and my greatest expectation was fully realized. I found the sod completely loose and very easily cross-plowed for fall wheat. I find that breaking the sod and letting it crumble is the best plan; the fall rains have a much better chance of washing it down than if it lay flat upon the 'under sod.'

My experience has led me to believe that corn must be planted (in this State) either very early or very late. I have tried it both ways, but have always found the late corn to do the best. The wheat crops are different. Spring wheat should be sowed as early as possible, and fall wheat the same. Some have differed with me, but at last have found that early wheat always does the best.

As to potatoes, I believe that in this section of country at the present time, they will amount to nothing. The vines are very thrifty and a dark green, and do very well until about the time they begin to blossom; then a very small bug, resembling the "lightning bug," swarms by the million, lighting upon the vines, completely stripping them of their leaves and stems. If some preventive could be found to kill them it would make thousands of dollars for the man that invented it. Any thing that grows upon vines (potatoes excepted) will do very well here. Watermelons grow to an enormous size. I raised one here in '59 that weighed 56 lbs.; ten men eat what they wanted of it and there was enough left for me. I sold the melon for $2.50. This year, however, they seem to be scarce; no person here planted them. I am fully satisfied that this is the best stock-raising country in the world. Cattle will live the year round independent of man's labor.

WILLIAM H. LAMB.

Look out for Weeds!

What, *now*, when the growing season is so nearly over? Yes, now, emphatically NOW. Just at this season, especially in the potato fields and gardens, and by the sides of fences everywhere, weeds are ripening their seeds and scattering them far and wide over the surrounding land. In former days, when the potato held its leaves fresh and green throughout the entire Summer, weeds were smothered out, and the ground nicely cleaned for the next crop. But of late years, since the blight has set in, the tops die early, and weeds spring up and get vigorous possession of the land. Special care is needful, therefore, to subdue these interlopers. Go through the fields, at once, and cut down or pull up the luxuriant weeds before they ripen their seeds and scatter them in myriads over the field. By all means pull up those in the garden. Pile them all in heaps, and as soon as partially dry, mix them in a brush heap and burn them, or better, add them to the manure heap, where fermentation destroys the vitality of the seeds.

Now for a General Clearing Up.

Commence about the buildings. There may be the neglected stables which have been used while vacant in Summer, as receptacles for loose straw, empty barrels, broken implements, and all sorts of rubbish stored there amid the haste of the season's work, to get them off from the barn floor, and "out of the way for the present." The room will soon be needed to shelter stock during cold nights and inclement storms.

The poultry house may need cleansing. If the deposits have not been removed, add them to the compost heap. Thoroughly cleanse the roosts and give the whole apartment a good whitewashing as the best preventive of vermin.

The barn-yard should never become the dismal swamp too often witnessed toward Spring. Arrange drains to quickly carry off falling rain, provide eaves tronghs and leaders to conduct the water from the buildings away from the yard. If water for stock can not be conveniently brought to the yard from other sources, a cistern to receive that from the roofs will give a large supply of the best quality. Raised walks will greatly add to comfort in the daily visits to the different departments during the Winter.

Many meadows are disfigured and the grounds worse than wasted by scattering thickets, bushes and stumps. These, and hedge-rows along the fences and in the corners, are the magazines of weeds which send ont their marauding forces yearly. Take them ont by the roots; aeres may be added to many farms in this way. The roadsides should be cleared of such nuisances.

A large stock of firewood may be gathered on many farms by collecting broken rails and half decayed fencing materials which lie scattered about the premises. There are also fallen trees and branches broken off by storms in the woods which may be turned to good account in the woodpile, if gathered before covered with snow.

In short, let there be a general clearing up of the premises, so that winter may find every thing prepared for its coming, and the farmer may have the comfortable feeling that all is *snug*.

Hardy Trees and Plants.

No one can take up a nursery man's catalogue, without seeing certain trees described as "hardy," "half-hardy," "slightly tender," etc. The same thing is seen in horticultural books and papers. Now this is all well: it helps one to arrive at an approximate idea of the character of the tree, but it does nothing more. For experience shows that hardiness is quite a relative term, depending on soil, exposure, elevation, and other things. The only way to ascertain with certainty whether a tree is tender, or no, is to *try it*. Give it the average treatment of other things; don't nurse and pet it, neither handle it roughly. For the first Winter, a little protection may be allowed, but not afterward. If it succeeds well for two or three years it is probably hardy.

Cheap Paint for Rough Fences, Out-Houses, etc.

The Scientific American says: "Pulverized charcoal and litharge (oxide of lead,) in equal quantities, mixed with raw linseed oil, makes a cheap and very durable dark-brown paint for rough boards of out-houses. It is also a good paint for exposed iron work. The addition of yellow ochre makes it a dark-green color."

This appears to be a good recipe, if charcoal can be conveniently pulverized finely. It would need to be passed through a fine sieve to remove the lumps of coal. Probably the coal dust with the litharge would form a good body, while the litharge would make it dry rapidly. For producing black color merely, it would be cheaper to buy lampblack, which is in reality a very finely divided charcoal collected from the smoke of resin or turpentine. In ordinary times lampblack is very cheap and might be used instead of the charcoal. The greenish tint given by the yellow ochre would be preferable to the dark or blackish brown of only the litharge and coal or lampblack. Can any one speak from experience in regard to the above recommended paint?

How to Make Handy Farmers.

We use this heading to denote those men who are skillful, and ready in doing whatever is needful to be done on the farm. A thorough agriculturist ought to be an intelligent man in more departments than one. He should know a little of Chemistry, in order to understand the theory of manures, the nature of different soils, the action of the atmosphere, etc., etc. And Botany would teach him the names, the origin, and the most scientific mode of managing the grasses, grains, vegetables and weeds within his domain. Geology would teach him very much about the subsoil. The elements of Architecture would help him in building a house or a hog-pen. Philosophy would not come amiss. Not that he should be a learned professor in any of these studies, but a slight knowledge of them, and the possession of books treating on these subjects would be very useful to him. With a little effort, he could then easily "post" himself on any subject requiring his immediate attention.

But this is not the precise point we are aiming at. It was a more practical matter, and was intended to urge young farmers to become skillful, handy, in all the operations of agriculture. An illustration or two will show what we mean. John Smith is a hard-working farmer. From January to December, and from morning to night, he is ever busy; but he does not always work to advantage. He always works in a particular way, having no skill in adopting new and improved methods to save labor. He is not handy at all sorts of work. He can hold a plow, but can not mend a harness; he can hoe and dig like the veriest slave, but can not repair a broken tool: whenever such an accident happens, he has to stop his most pressing work, and go a mile or two to the village to get mending done which he ought to have been able to do himself. He can drive a horse, or yoke of oxen, but can not doctor them for a bruise, or other slight ailment. Yes, a good farmer is he, yet with certain important drawbacks which add much to the drudgery and cost of his labor.

John Jones is made on a different pattern. He is as industrious as John Smith, but don't work as hard. He turns everything to account, and *makes* circumstances favor him. If one method will not serve his purpose, perhaps another will, and he tries it. He has a knack at doing a little of anything and everything. If any of his roofs leak, he can mend them; yes, and with the help of a few hands, can shingle them complete. His awl, waxed ends, and a few pieces of leather in his tool-shed, enable him to mend his harness quickly. He can repair a bob-sled and paint it. He can graft, and bud, and prune his fruit-trees, and do it well; in short, he is a Jack-at-all-trades, and, in a good degree, independent, and master of his situation. Such a man is bound to succeed, be his avocation whatsoever it may.

The way to multiply such men is to commence early. Let the father and mother teach their children to help themselves. Give them a few tools to work with at their leisure. Encourage them to make and mend, and to become "handy." Praise their successful experiments. Inspire them with the just pride of being independent, of being able to take care of themselves, of accommodating themselves to their circumstances, and of making events bend to their will. The seed thus early sown will spring up and bear fruit abundantly in after years.

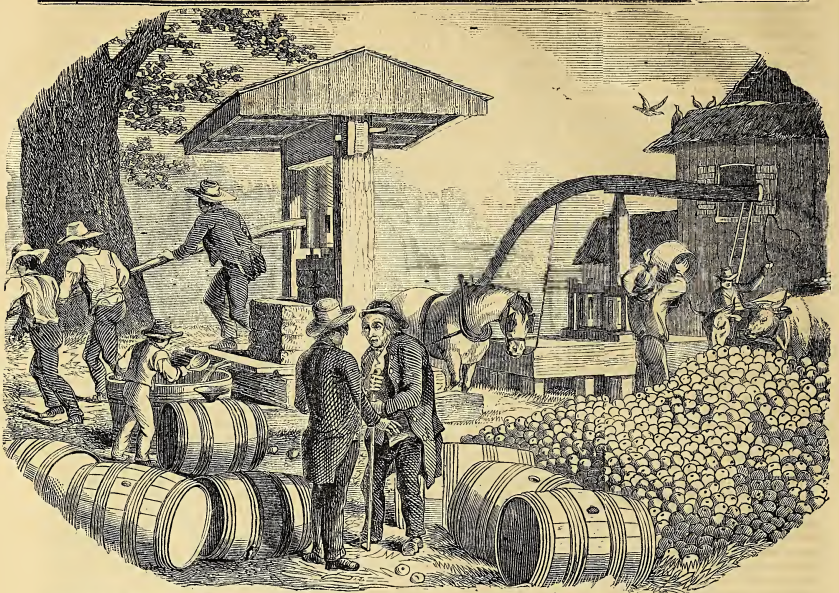
Sweet Potatoes Successful at the North.

Upon our table is a sweet potato worth looking at. It is well proportioned, 12 inches long, and girths over 13 inches; weight 3¾ lbs.! It was grown by Wm. F. Walker, commission merchant of this city, at his country place on the Passaic River, six miles north of Newark, New-Jersey.—We notice this potato more particularly, to call attention to the fact that Mr. Walker's experience confirms what we have all along claimed in the columns of the *American Agriculturist*, viz: that sweet potatoes can be advantageously grown in this latitude, and further north. Mr. Walker cultivates from one fourth to a full acre every year, for his own family use. He says he can, on his soil, which is sandy, produce a hundred bushels of sweet potatoes, cheaper, and with more certainty, than the same amount of mercers. He prepares the land the same as for other potatoes, taking that which was manured broadcast the previous year, and, after plowing it, opens furrows with a plow, shakes in a light coat of well rotted barn-yard manure, and throws back the soil with a plow, one furrow from each side, leaving ridges 2½ to 3 feet apart. The plants are set along these ridges, 1½ feet apart. A plow is run along between the rows, followed by the hoe, before the vines get too large. After this, say twice during the season, the vines are gathered up and twisted in masses, and laid along the top of the ridges. This prevents their rooting at the joints, and also lets the sun in upon the soil. The potatoes grow large, and are of excellent flavor. The variety is what is called the Nansemond; the seed or vines originally came from Mr. Murray, the well known sweet potato grower of Ohio.

In addition to the above, we will say, that we are daily using a full supply of excellent sweet potatoes grown on our own place, where they are quite as productive as the common potato, and grown quite as readily, with little if any more outlay for seed. For our method, see p. 108.

How to Keep Sweet Potatoes for Winter and Spring Use.

Contributed to the *American Agriculturist* by J. C. Thompson, Staten Island, N. Y. Select the first clear drying day after the frost blackens the vines. With a grass hook or scythe cut off the vines and roll them out of the way. Use a fork to lift out the tubers; lay them on the top of the ridge to dry. Dig until noon, then begin to pack, taking those first dug. Have dry barrels or boxes with plenty of dry cut straw or fine dry straw ready; take straw and barrels to the field, put in first a layer of straw and then a layer of the sizable potatoes. They must be handled as carefully and packed as nicely as eggs. When full, cover with straw, and move carefully to a dry, warm room or cellar—if to a cellar, keep them up from the floor, and away from the wall; don't move or disturb them in any way; moving brings on decay. Keeping dry and warm is the great secret of success.



Cider—Stimulants—Cider Vinegar.

Cider making in the olden time was reckoned one of the important parts of farm labor. A goodly row of cider barrels must be ranged beside those of beef and pork, and the majority of farmers would almost as readily have dispensed with one as the other. The cider pitcher stood regularly upon the table at meal times, and the jug was a constant field companion. Happily that day is past. Experience has proved that more and better work can be done on the farm without than with alcoholic stimulants. (Fermented cider always contains a large amount of pure alcohol.) Every exaltation of the feelings is followed by a corresponding depression, so that in the end there is no gain of strength from stimulants, while the system is more rapidly worn out by these changes from the normal state. In surgical operations, or in cases of extreme sudden depression, it is sometimes necessary to borrow a little from the future, by resorting to temporary stimulants; but as a rule no permanent good can come from them to a person even in but moderate health. Good nourishing food—like beef steak cooked rare—well masticated, adds positive strength, and is the best of all stimulants. But supposing cider to be uninjurious for the time being, there is always great danger that the use of this, or of any of the beers, which are flat and stale unless they contain more or less alcohol, will develop a taste and craving for stronger alcoholic drinks. The general belief of the above facts has so reduced the amount of cider manufactured, that for years past not enough has been made to furnish a supply of vinegar. It is difficult to obtain a good quality of the pure article in most of our cities. The market is filled with unwholesome compounds, made from the refuse of distilleries, and with acids of various kinds. None of these deserve the name of vinegar, while in some cases they are absolutely poisonous, or at least ruinous to the teeth. Those who have continued to make cider for vinegar, find a ready sale at good prices, and probably apples may in this way be turned to better account than by feeding them to stock, although they are by no means unprofitable when fed.

The requisites for making good cider vinegar are few. Sound apples free from dirt, ground fine will yield the staple. It is well to arrange for two sorts, "extra" and good; the former to be made from the first pressings of the pomace, by which is obtained all the juice possible to be extracted without watering. After this pomace is removed from the press, pour a few pailfuls of water upon it, and shovel it over occasionally for a few days; then press it again, and add two or three quarts of inferior molasses to a barrel of the juice. Keep in a warm situation, and it will ferment into fair vinegar—far better than much of the trash sold under that name.

Vinegar is usually produced by simply allowing cider to stand in barrels with the bung hole open, until the second or acetous fermentation is completed, and it requires several months for the process to be finished, the time varying considerably with the degree of temperature. As fermentation depends upon the absorption of oxygen from the air, it will be much hastened by exposing as large a surface as possible. In some establishments where the manufacture is largely carried on, this is accomplished by allowing the liquid to drip slowly through beech wood shavings; the work of oxydation is finished within a few days instead of extending over months. The old-fashioned plan, however, will answer all purposes of ordinary vinegar making.

What Apple Trees to Plant.

A correspondent of the *American Agriculturist* makes the following well-timed suggestions. Select none but well tried varieties, such as are recommended for general cultivation by the American Pomological Society; leave new and untried varieties for amateurs and nurserymen until they are thoroughly tested. Do not be misled by agents or tree peddlers, few of whom are competent or reliable as advisers.

Purchase none but first class trees, perfect in root and branch; inferior or defective trees are dear at any price. Plant liberally of choice varieties for family use the year round, and if animals be kept, procure plenty of Summer and Fall varieties of sweet apples for their use.

For market, choose but few sorts. Winter apples pay best for the general crop. The Baldwin is the best paying market apple, and next in order of preference is named the Northern Spy*, Roxbury Russet (inferior in quality, but a

* This variety succeeds well in some localities, but can not be recommended for general planting. Except in favored regions it is a shy bearer. (See page 147, May.)

long keeper, and bears handling and transportation well) Wagener, Swaar, and Rhode Island Greening. No variety bears more uniform and abundant crops than the Greening, and it usually commands a fair price; but it bruises easily, and does not keep well long enough to be sent to a distant market in Spring. When the crop is large, the Fall price is not usually remunerative. In many localities the Baldwin yields as well, bears handling better, keeps longer, and in winter commands fifty cents per barrel more. The beautiful Lady Apple, when well cultivated, bears good crops, and commands the highest price in New-York, London or Paris. It bears transportation well, and is worthy of more extensive cultivation. Where suitable land is cheap, an extensive orchard of this variety would prove a very profitable investment.

For family use I would name the following in their order of ripening: Early Harvest, Sweet Bough, Golden Sweet, Summer Queen, Primate, Porter, Maiden's Blush, Jersey Sweet, Gravenstein, Fall Pippin, Fameuse, Twenty Ounce, Esopus Spitzenburgh, Tallman Sweet, and the Winter varieties above named, except Roxbury Russet, and this list will answer every purpose for those residing near large cities where they can get fruit to market in baskets conveniently at any time of year.

For the American Agriculturist.

Root-Grafting Apple Trees.

Apple stocks of the size of a lead pencil are selected, and their roots cut in lengths of four inches. The upper part of the cut is sloped one inch, and slit with a thin knife—a common shoemaker's knife with a narrow blade is generally used. The upper cut of a root is the best. A cion of the particular variety wanted and of about the same size as the root, is cut in same lengths and sloped and slit in the same way, at the bottom to correspond to the cut in the root; then they are slipped together so as to match exactly on one side, and bound with a narrow strip of waxed paper. The cion should be cut square across at the top of a bud. The grafts, as they are now called, are placed close together in shallow boxes, mixed with damp saw-dust and stored in a cool, dry cellar until the frost is passed. They are then planted, with a round or flat dibble, in rows, by running down the dibble a few inches, inserting the graft, running the dibble down again on the side of the graft, and just below it to fasten the bottom well, and then pressing the upper part of the dibble against the side of the graft. Be particular to fasten the bottom well to exclude the atmosphere and press the whole firmly to prevent drying. Two buds should be above the surface; the grafts should be eight inches apart in the row and the rows three and-a-half feet apart. The upper four inches of the roots with their stems are often planted at the same distance apart and budded in July of the same year—these make rather better trees to sell. Nurserymen usually root-graft because it is done in the Winter when help is plenty; one thousand grafts are usually made in a day. Waxed paper is made by mixing six pounds of rosin and one pound of bees wax with one pint of linseed oil or lard, and spread with a brush on manilla paper—newspaper is generally used but it is not as good. When used it is cut in strips one half inch in width.

Toledo, Ohio. J. H. C.

Apple Pomace for Fruit Trees.—A writer in a French Pomological journal states that he has experimented largely in using apple pomace as manure for apple and pear trees, and with the best results. The soil was removed from about each tree to the depth of the upper roots, and three or four forkfuls of the pomace thrown in and covered with earth. A remarkable impulse was given to the growth of the trees, and in several instances where pears had cracked badly, good sound fruit was produced.

Tim Bunker in his Garden.

"What kind of pears do you call them, naber?" asked Jake Frink as he stood admiring a dwarf Flemish Beauty, loaded with ruddy, russet fruit.

"That is a dwarf pear tree," said I.

"It looks like a giant," said Jake, confounding the tree with the fruit. "I never see such pears in all my life. Nothing but perries 'll grow on my place. I've heern of them dwarfs, but never tried 'em. Do all come as big as that?"

"Well, you see, they graft almost any kind of pear on quince, and that makes the tree grow small. But the fruit is generally bigger than it is on the pear stock. Dwarfing does not alter the fruit. It only makes the tree small."

"Dew tell. You see I thought dwarfs was all of one kind. I shall have to own up on these pears, naber. I tell'd you at the time you were settin 'em eout, five years ago, that they never would come to nothin'. Uncle Jotham sot eout a lot, and his'n didn't dew nothin'. They grew miserable scrubs, got lousy, and worm-eaten, and I guess there want one left arter three years. But now I see Jotham Sparrowgrass and Timothy Bunker are tew individuals, if not more."

Jake Frink's eyes hung out as he went round the garden, spying the pears, about as much as when he saw that first crop of hay in the horse-pond lot. I have kept back my pears from bearing more than most cultivators do, and think I find my account in it. Gentlemen who own small lots in the city or country village are apt to be in a hurry to realize; they let every fruit that sets hang on even the first year. This is particularly bad for the bottom limbs of dwarfs, which are the most difficult to coax into a generous growth. If they bear much fruit they will not make wood, and the bottom of your pyramid is spoiled. I have seen a good many dwarfs killed outright by overbearing. With the standards there is not so much danger—indeed, none at all, if we except the Bartlett, and a few other early-bearing varieties.

I picked off all the fruit for three years, and threw all the force of the trees into wood. If I can get good stout wood well ripened in the Fall, I consider this the best crop a tree can bear for four years at least. If a tree is a bad grower, I keep it back still longer. I have some standards out nine years, and dwarfs six, that have never borne a fruit, and I guess I know what I am about. They have blossomed profusely, and some of them set fruit—but I have pulled them off, though it went very much against the grain.

When they come into bearing, after such delay, there is great satisfaction in looking at the fruit, some in eating it, and more still in giving it away. You see, in growing a handsome fruit, perfect after its kind, a man enters into co-partnership with nature. He helps nature to do something which would be impossible without him, and nature helps him. The joint product is as much an honor to man as it is to nature. A basket of fine pears glorifies a gardener as much as a great speech does an orator. The giving away of the fruit or putting it upon exhibition, is the publication of his speech. It sets the gardener to talking in a very mute kind of way that all sensible people comprehend. I should call an orator rather stupid who spouted his speech to the winds. He wants an audience. That gardener lacks both wit and manhood, who is content with eating his own pears. They should have a chance to speak for him.

And this reminds me of a circumstance that has just happened in Hookertown. You see a week ago Sunday, Mr. Spooner preached a sermon on the text "By their fruits ye shall know them," applying the doctrine among other things to Slavery, and showing up this wicked war as one of its fruits. He pictured out a big tree, and the branches hung with treason, rebellion, oppression, theft, murder, and about all the vices that disgrace mankind. Now, you see, human nature is weak, and my mind instead of following the thread of discourse, was running on the fruits in my garden. My Bartletts were just in their glory, and a man couldn't have said fruits on any occasion, without my thinking of them. So when we got home from meeting, I said to Mrs. Bunker: "Sally we needn't be ashamed to be known by our fruits, suppose we send Mr. Spooner a basket of Bartletts."

"Very well," she said. "Send the basket heaping full and send it the first thing in the morning so that he will know what it means."

Sally, you see, is one of Mr. Spooner's right hand men, or rather women, a modern Dorcas, to whom it seems to come natural to help the poor, and make other folks happy. So I thought it fair to credit her while I credited the minister, and put on top of the basket a card: "With the compliments of Mrs. Bunker, Matt. 7: 20."

I am getting to be pretty well along in life, and my enjoyment of gardening increases with my years. I am only sorry that I had not begun to plant fruit trees earlier. I hope your young readers will learn wisdom and improve the present season.

Hookertown, Sept. 15th, 1862.

Yours to command,
Timothy Bunker, Esq.

Preparing for Winter.

In this month, most preparations for Winter should be completed. It will not do to wait until the ground is frozen and covered with snow. Work done at such a time will be poorly done. Indeed, much of our fall work should be already accomplished; but let there be no longer delay.

In the Garden—Have an eye to those late vegetables. The cabbages—are they all gathered into the cellar, or covered nicely in the garden, where they can be reached without difficulty? See that they do not get water-logged. Are they likely to be infested by mice? We have known whole stacks to be thoroughly riddled by them. See that they have good ventilation, both those in the cellar and out of doors. And as with the cabbages, so with turnips, carrots, beets, celery, etc. Guard all the latter from frost, mold, rot, and excessive dryness. Keep them sound and plump, ready for man or beast.

Is the garden well ridged up, so as to throw off the surface water, and to bring the stiff, bottom clay up to the frost? Whoever wants to deepen his soil, to kill noxious grubs, and to have his garden dry and early in the Spring, will be sure to throw it up into ridges in the Autumn. A long spade, and a strong arm and will, can accomplish this quickly. Lay the ridges in a different direction every Fall.

The bean-poles, stakes for tomatoes, melon and cucumber boxes, and any other frames for small hot-beds—are they all under cover? It is well known that they will last many years

longer, if this care is given them; and besides, a garden looks slovenly, with its summer furniture lying around loose. One's reputation for order and neatness is worth something.

Has that wet corner been drained? It has troubled you for several years. Vegetables, vines, and fruit trees planted there have struggled hard to live: you have often wished it drained, but have not yet found just the right time for doing it. *Now*, the present week, is just that time, for the ground is clear of crops, and you have the most leisure. Cut the drain at least three feet deep; secure a good fall and outlet; if possible lay hard-burned pipe, of not less than two inches bore, making good joints, and covering all well before hard frosts. That piece of work will yield you real satisfaction.

A word or two for the grape-vines. The first week of this month is perhaps the best season for pruning. Later in the Fall or Winter, it is too cold for comfort to the fingers, and the work is not apt to be done carefully. If the vines are to be laid down and covered for the Winter, (and there are few if any kinds not thus benefited,) it is best to prune before putting down. They take up less room, and you have the cuttings for propagation if desired. The mode of pruning will depend on the method to which the vines have previously been subjected. If it be the *spur-method*, then cut back the side-branches to two good buds. If it be the *renewal*, cut out the old bearing wood down to a strong bud at the base, and cut off the new cane (the present summer's growth,) at the top of the trellis. Now, bend down the canes carefully to the ground, fastening them down with cross stakes. Throw a little rubbish over the canes, and upon this put a few inches of common earth, only just enough to hide the vines from sight. Too thick a covering is as bad as none.

Are the roses, vines, shrubs, and other plants of the flower garden protected against injury in Winter? Even the common June roses bloom better if laid down and slightly covered. The hybrid perpetuals are not safe without some protection. The Bourbons, Noisettes and Chinas absolutely require it; indeed, experience shows us that the best place for them between November and May, is the cellar, or green-house, or cold frame. Around the crowns of nearly all herbaceous plants and rare shrubs, a few leaves or a handful of rubbish should be gathered and a shovel full or two of manure added. The good effects will be visible next season. Newly-planted shrubs and small trees, (conifers in particular, if not certainly hardy,) should be blanketed with evergreen boughs, tied loosely about them. If any one is experimenting with rhododendrons, kalmias, azaleas, etc., we would advise him, for at least the first year, to stick in a few pine or cedar branches among them. Or, better still, drive in a few stakes, and tie to the evergreens to them; else the snow will beat them down on the tender plants and break them. The broad-leaved plants will be sure to winter safely, and come out in the Spring fresh and strong. We need hardly add that hillocks of earth should be thrown up around the stems of all newly planted fruit trees. This will guard them against the gnawings of field mice, will protect the roots from excessive freezing, and keep the tree ballasted against riotous winds.

ELSEWHERE.—See that the sheds and barns are snug and tight. When the sailor sees a storm coming, he furls the flapping sails, shuts down the hatches, and makes all things trim for the gale. So should the farmer and gardener, on the approach of stormy Winter. Batten up those wide cracks, on the windy sides of wood-shed, stable and cow-house. Give every loose board the benefit of a nail or two. Provide, in every possible way, for the comfort of man and beast. Lay in good supplies of wood or coal. See that the stoves and pipe are in good order. Have the chimneys burned out on some damp, quiet day, not waiting to have it done accidentally, and at a bad time. In short, do now whatever it becomes a good householder to do at this season. Then, when the winds roar, and the snow falls in eddying heaps, you can sleep quietly, knowing that you have done your duty.

Cleaning up the Flower Garden.

While neatness and order are always desirable in this department, there may be too much of even this good thing. In their anxiety to have the flower garden the "pink of neatness" when it can no longer show the pink of beauty, young gardeners are scrupulous to remove all fallen leaves, dead stalks, and whatever might offend the eye. This is very well, provided something be substituted in their place as a protection for the roots that are to bear the severity of the Winter. Doubtless, one reason why many of our fine shrubs and herbaceous plants prove so tender is that they have to go through the Winter *naked*. We strip them of the clothing which nature designed for them, and then wonder that they get frost-bitten!

Look at our wild plants, covered in Winter by their own decaying haulm, by scattered leaves, and the overhanging forest. Transplant them into our spruce parterres, where every brown leaf is swept up in the Autumn, and they would surely suffer, if not wholly perish. So it is with the common domesticated plants of our gardens. Many of them have, indeed, got used to the exposure, yet they suffer from it. The better way is to allow of a little sloveliness in the garden in Autumn, *rather* than expose our favorites to an untimely death. Let the leaves and dry stalks fall down around the crowns and roots of the plants, and so protect them from the vicissitudes of the Winter. This is nature's plan, to be followed *when* we can not improve it.

A very efficient and neat way of affording needed protection is to cover the roots with small branches of evergreens. They lie lightly upon the soil, and are rather ornamental in appearance. If these can not be had, straw, or leaves from the woods, properly secured, will answer every purpose. If neither can be used, leave the dried stalks, and clear up in Spring.

Prepare now for Spring Gardening.

Spring work in the garden is by most farmers left to be done at leisure intervals between the more extensive operations of putting in the field crops. It often occurs that, from press of business, much that should be done in this important department is neglected or slighted, because the leisure is not found, and as a consequence there is but a poor show of vegetables throughout the season, and these always late. Something may be done during this month of November toward early gardening in Spring.

At this time most of the vegetable crops have been secured, and there is sometime to work in the soil. If it be wet, draining now will prepare it for plowing next year before the fields are ready to be worked. If draining be impracticable, plowing and subsoiling will greatly improve it. Trenching, especially on heavy soils and working in plenty of coarse manure or muck, will greatly ameliorate heavy soils. A good coat of manure plowed in now, ready to be lightly cross-plowed and thus thoroughly mixed with the soil in Spring, will give a good rich tilth.

Now is the best time to set asparagus and rhubarb roots, two indispensables in every family garden. If old roots are procured, they will yield at least a partial supply for the table next Spring, and much time will be gained in their growth. Though late, strawberries will live and thrive if transplanted with care immediately. They may yield but little next season, but the work will be done, and when the fruit does come, you will feel abundantly repaid for the labor. Blackberries, raspberries, currants, etc., may all be put in place, also a few dwarf pear trees, if there be space. These trees require much care to produce well, but every cultivator will soon find them his especial pets in the garden.

And the grape vines. Have you a full supply? Do not let the Fall pass without securing enough for plentiful family use. These and the currants, gooseberries and dwarf pears, will be benefited by spreading coarse manure about them as far as the roots extend. The winter rains will carry much of it into the soil, where it will be ready for use by the roots in Spring.

Finally, now is the time to build or repair the fences, gates, trellises, etc. A coat of paint, or even whitewash, would add fifty per cent. in appearance to many a garden enclosure, in addition to its value in preserving the fence.

Blood's Seedling Grapes.

We have received samples of these from Mr. James Blood, of Newburyport, Mass., with an accompanying note, stating that they were raised from seeds of Malaga raisins. Mr. B. is doubtless sincere in his belief that such is the fact, but from the peculiar muskiness both in taste and smell, the thick leathery skin and hard pulp, so little removed from the ordinary wild grape, we should have judged them seedlings of the fox grape. Two kinds were sent, one purple, the other amber color; the former the best, but neither would seem to be very desirable where the Concord, or Hartford Prolific will mature. Mr. Blood says they are hardy, and ripen from 8th to 12th of September. *

A Tour in My Garden.

MR. EDITOR:—While some men travel over land and sea in pursuit of pleasure, I contentedly stay at home, and take a daily trip through my garden, my wife and children accompanying me. Would you like to overhear our quiet talks? Now, we touch upon

DWARF PEARS.—Wife and daughter ask if these trees are called dwarf because they look rather feeble, and bear so little fruit. No, no, dears: in your simplicity, you are hard upon me. The trees are made dwarfish by being budded on quince roots, but they ought not to look feeble, and the fruit ought to be large and abundant. I ought to have manured the roots last fall; then the trees would not reproach me so. But next, look at our

MELONS.—How did you manage *them*? I started them on pieces of turf in oyster-kegs, (sawed in two,) plunging them into the soil of a hot-bed. When they were large enough to transplant, the season was ready for them; and all I had to do was to turn them out bodily from the kegs, and set them out, turf and all. This gave them less check than though I had sown

them in the hot-bed itself and transplanted each plant separately. I think ten days were gained in this way, and I mean to follow it every year.

GRAPE VINES.—And did you raise these little ones from seed, father, just as you did the melons? No, indeed. Over yonder, are several rows of vines raised from seed of the choicest varieties. They will bear fruit next year; yet I think, judging from the looks of the leaves, that the fruit of most will be poor. For, you must know, that the seeds of grapes do not produce vines exactly like their parents. These plants, on this side of the walk, were raised from cuttings put into the ground this Spring; I dug trenches a foot deep, spread a little sand at the bottom, set in my cuttings in a slanting direction, and covered them, leaving only one bud out of the ground. These plants are just like the parent vine from which the cions were cut.

THOSE QUINCES are large and beautiful; have you any secret process for beating your neighbors? No; I simply set out healthy plants in good soil; I keep the ground clean and well enriched. A little salt is spread on the border once in two years, but I am not sure that it is of much importance. I thin out the old wood every year or two, and that is the whole secret.

And so ended our little stroll for one day. Don't you think, Mr. Editor, that we can ourselves get some good suggestions from our families, while we also teach them valuable lessons in gardening? So thinks A READER.

The Adirondac Grape—Interesting Report.

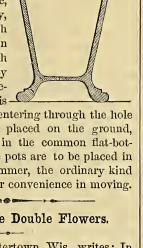
This new grape has heretofore been shown at a few Northern Agricultural Exhibitions, and lately at the meeting of the Amer. Pomological Society at Boston, and not a few have been incredulous as to the claims put forth in its favor, especially as little has been known of its history or exact locality. Mr. Bailey of Plattsburg, who is as yet the only propagator, sent us a cluster of the fruit Oct. 1st, and we laid it before the Fruit Growers' Weekly Meeting, at the office of the *American Agriculturist*, Oct. 2d. It was pronounced very fine, resembling the Isabella in size, and general appearance, but of a lighter color. It has very little pulp, and a pleasant but not very high flavor. In these respects it so much resembles the foreign grapes, that many gentlemen half suspected it to be an exotic variety, and the fruit grown under protection. To get at the truth of the matter, we proposed that the Society should send a competent uninterested committee to Lake Champlain, to investigate the matter thoroughly, in part at our own expense. The idea was favorably received, a few public spirited gentlemen offering to contribute something toward the expense. The meeting unanimously selected Mr. A. S. Fuller as a suitable person to go on the mission. Mr. F. started on the journey, traveled some 300 miles, and returned in time to report at the meeting on Oct. 9th, as follows:

I went to Plattsburgh, but there learned that the original Adirondac vine was in the grounds of J. G. Witherbee Esq., at Port Henry, in the town of Moriah, Essex Co., about 40 miles north of Whitehall, in latitude 44°. (Mr. W. not being a propagator of fruits, and not attaching much importance to the matter, sometime since agreed to furnish Mr. Bailey of Plattsburg with all the cuttings, except what he gave to his friends). The original vine stands about 10 rods up the slope, and about 50 feet above the waters of lake Champlain. The hills at the base of which the vine grows are some 200 feet high, and shelter it on all sides as well as it could be protected naturally, the valley opening only to the South. The soil is a deep sandy loam, intermingled with the disintegrated rock continually washing down from the hills above. Mr. Witherbee says he first noticed the vine in 1852, and, supposing it to be a wilding, or an Isabella, dug it up, as he supposed; but the next season a sprout from the old root, or a seedling, came up in the same place, and this was allowed to grow. The following winter it killed to the ground, but the next season it made such a fine growth that he protected it at the approach of winter. The following season it produced fruit which ripened some weeks before the Isabella standing in the same garden. This vine has been laid down and covered every winter since, and has never failed to produce a good crop.

The vine at the present time has three shoots from the ground each of which is about 1½ inches in diameter. They cover a trellis some twelve feet high, and sixteen feet long. The vine can not be said to be trained, although a part of the branches have been tied to the trellis. The leaves are now (Oct. 6th,) perfectly healthy, there having been no frost to kill them, neither have they been attacked by mildew. The Isabella and several other varieties in the same garden, are also perfectly healthy, and growing rapidly. The Isabellas are not yet ripe. The vine has every appearance of being an Isabella both in leaf and wood, with perhaps the exception of the *ale* of the leaf overlapping more in the Adirondac than in the Isabella. The points of difference are: The earliness of ripening, and the larger size of the bunches and berries, and the lighter color of the fruit. The clusters are more compact, and the berry is nearly round, while the Isabella is oblong. The quality of the fruit is very good, but not rich; pulp very tender, parting readily from the seed. The clusters of fruit presented herewith, I gathered from the vine myself; it will be seen that they correspond entirely with those shown at our meeting in the office of the *American Agriculturist* last week. I consider it a great acquisition. A. S. FULLER.

An Improved Flower Pot.

The accompanying sketch represents the cross section of an improved flower pot, which has some manifest superiority over those in common use. It has a broad base, and so stands firmly, even when filled with tall plants and when blown upon by high winds. And besides, by the peculiar arrangement of its bottom, it is proof against worms entering through the hole in the bottom, when placed on the ground, which is a great evil in the common flat-bottom pots. Where the pots are to be placed in the soil during the summer, the ordinary kind would be preferable for convenience in moving.



How to Produce Double Flowers.

A subscriber of Watertown, Wis., writes: In a former number of the *Agriculturist*, mention is made of fine specimens of balsams produced from seed several years old. The long keeping of the seed is one secret of success. Balsams are best when the seed is between 4 and 7 years old; stock-gillics, wall-flowers, etc., must be grown from seed at least 2 years old. Treat the annuals named in the very best manner; leave only a few seeds on each plant; sow them in the most fertile and best prepared ground; and yet they will deteriorate from year to year when grown from seed of the preceding year. The reason is obvious. The double flower is a monstrosity, is a disease; the essential organs of the flower, those which in the natural state of the plant should have produced the seed, are wanting, being converted into mere protecting organs, or leaves. But that monstrosity is just what we desire; and the best and surest way to continue it, in perennial and biennial plants, is to propagate by cuttings, layers, or grafting, instead of in the natural way, the parts so severed from the mother plant and brought to form a new plant retaining the desired double flowers.

The Yuccas.

He who wants to adorn his garden with something really *odd*, should have one or two Yuccas. They are unlike almost everything else. The plant they most resemble is the old Century-plant. Mr. Downing suggests that the most appropriate place for them is near the dwelling, on account of their stiff, architectural expression. Set them in ornamental pots or vases, and place them on the corners of a parapet or terrace. The foliage is bold and striking, and the flower-stalks, which shoot up some three or four feet, covered with creamy white blossoms, bell-shaped, and pendulous, are exceedingly interesting.

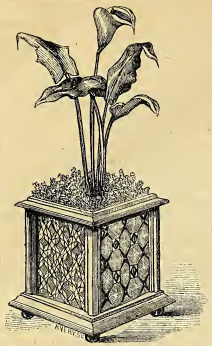
We recollect seeing, a few years ago, one variety of the Yucca growing wild on the shores of the St. Johns, Florida, where it is called by the inhabitants, "Adam's Thread and Needles." This name originates from the sharp points of the leaves, and the thready filaments hanging from either side. The common variety (*filamentosa*) is hardy in the northern States, and will grow in almost any soil. As to exposure, it does best when partially protected by overhanging trees. If set in the open garden, it is well to put a rough box over it in winter, or to throw a few evergreen boughs around it. Yet this is not necessary. A new variety, the *stricta*, is said to be quite hardy and desirable. [The above is from an associate Editor of the *Agriculturist*. We have three Yuccas growing at as many points in an open, exposed lawn, and have given them no protection. They have flowered finely every year since setting out. The roots of hardy Yuccas are now obtained quite cheaply at most of the leading commercial gardens.—O. J.]

The Euonymus.

This shrub is popularly known by several names, as spindle-tree, burning-bush, smoke-tree, strawberry-tree. There are several species—twelve in all, we believe—four of them native to this country, and six of them quite hardy. The English species has four varieties, of which the broad-leaved (*E. latifolius*,) is the finest. These shrubs do not push out their leaves quite as early in Spring as the lilacs, but they hold their foliage later. Their flowers are but little showy, yet the fruit makes up all deficiency. This hangs in clusters of brilliant red, of the size of a strawberry, (hence one of its names) and clings to the stems long after the leaves have fallen, even when covered with snow.

Of the broad-leaved species, Loudon says: "This forms much the handsomest shrub, from its broad shining leaves, and its large, red, pendulous fruits with orange-colored seeds, which, when the capsules open, are suspended from their cells somewhat as magnolias hang from their stobiles." The wood is handsome in winter, being of a dark, reddish green, and with long-pointed buds. It grows from eight to ten feet high in deep soils, and produces greenish white flowers in June and July. To attain perfection, it should be planted in an open lawn, and be allowed to develop itself on every side. It should be in the smallest collection of shrubs.

PRESERVING CARNATION BLOOMS.—To do this, keep the stems well tied to stakes, and soon after the bud expands, tie a soft string around the blossom to keep it from breaking down. Why might not rings of thin India rubber be made to slip over the opening buds, which would expand enough to admit the development of the flowers, and yet would prevent their breaking?



Glass Mosaic Flower Pots.

It is rather a matter of surprise that so few improvements have been made in the style of flower pots for use in the house. The old red earthenware article so commonly seen, is very unsightly, and greatly diminishes the otherwise attractive appearance of the flower stand. Painted wooden boxes are objectionable from their speedy decay, and the broken and disfigured china-ware, pitchers, etc., which are pressed into service, are in worse taste than the red crocks.

There were shown at the recent International Exhibition in London, very beautiful articles for this purpose, made of colored glass set in a light iron frame work, as shown in our engravings. The glass used was of different colors, and arranged in regular mosaic patterns, giving a very beautiful effect. They were of different forms, square, rectangular, octagonal, etc., and of numerous styles of mosaic. The more expensive sorts were very elaborately finished, forming objects every way worthy a place in the most richly furnished drawing room.

We present these as a hint to some of our manufacturers. The only objection will be the cost, but perhaps that may be reduced to come within the means of the masses. Even if the above described styles are not adopted, we look for some improvement over the present rude manufactures, which are entirely out of keeping with the other articles that make up the furniture of the sitting room.

ORIGIN OF THE WORDS NOSEGAY AND BOUQUET.—A writer in the Gardener's Monthly records that Cleland, in his Celtic Vocabulary, says: "gay, applied to nosegay, comes from the Else tongue, in which *geach* signifies a bough or bunch of flowers which might be held to the nose. From the old word *bought*, or little bough, comes the French word *bouquet*, for nosegay.

Beautiful Floral Ornaments.

Hyacinths, as ordinarily grown in glasses and pots, are deservedly favorites. Few flowers give better reward for the little pains required to raise them successfully. A very tasteful arrangement of these with other bulbs is common in Germany, which we do not remember to have seen practised here. Single hyacinths, together with Scillas, Snowdrops, Crocuses, and other small bulbs, are placed in shallow dishes—soup-plates answer a common purpose—and arranged in any form to suit the fancy. The roots spread out and intertwine until the flowers rest on a network that keeps them in their place.

Having selected the bulbs, place a foundation of charcoal, and on this a layer of damp white sand. Set the bulbs a little distance apart, and remove the dish to a dark room where they may remain for about three weeks. This treatment encourages the roots to form plentifully before the buds appear. At the end of that time a little water may be given (being poured down the sides of the dish), and if the roots are pushing the bulbs up out of place, pour dry sand over them, so as to surround them at least half way to their crowns. When the blossom buds and leaves have made a little growth, they should be brought to the full light of a window, and in all respects treated like those in glasses.

Dwarf hyacinths are best for this use. They are raised from well ripened bulbs of the same kind as the large ones, but not much exceeding a large walnut in size. They may be obtained at most seed stores, and will yield a large amount of enjoyment for the money invested.

A very pretty experiment with hyacinths is thus described in the "Parlor Gardener": Having made your choice among the brightest shades of blue, red, and yellow, you must give your greatest care to a charming experiment which will be the source of a very agreeable amusement for you all the Winter. You can procure, at a small expense, two vases of plain, clear, uncolored glass; both of the same form, except that one has no bottom, and is a little smaller than the other. They are to be used as follows: Put into the one open at both ends, one of the finest of your hyacinth roots; suppose you take one of a fine red—a Sultan Soliman, for instance; place this bulb in a position inverse to its natural position, that is, with the bottom up, and the top, from which the leaves and flowers are to come downward even with the orifice at the bottom of the vase. Then you must crumble a mixture of good garden earth and leaf mould over the bulb until the vase is three-quarters full. A second bulb with a flower in strong contrast to the first, say a blue, if the flower of the first is red, and *vice versa*, must be next placed in the vase, so that the top shall be even with the upper orifice. You have nothing more to do than to place the vase thus prepared upon the first vase, after filling it with water. Two similar couples look very well, placed upon two ends of the mantle-piece of a room in which people habitually sit, and where, consequently, fire is constantly made while the cold season lasts. The earth in the upper vase should be moderately watered as soon as the bulbs are placed in it, and then kept constantly moist, avoiding excess, by renewed watering whenever you perceive that the earth is getting dry.

At the end of two days, the crowns of the two bulbs will both send out straight, white roots; those of the reversed bulb turn down in curves, but do not fulfil their functions worse for that. Very soon the two bulbs placed in a contrary position to each other put forth leaves—the one into the air, the other into the water; then you will see appear in the midst of the transparent liquid the buds on the floral stalk, and finally the flowers, as beautiful, as well formed, of as rich a color, surrounded by leaves of as fine a green as the corresponding parts possess, of the other flower planted in the ordinary manner, and vegetating and developing in the air—its natural element. It is true that time is necessary for all this to be accomplished; bulbs planted in October will flower fully in February or March; but is it not a pleasure to watch day by day the phases of development, above all that of the hyacinth which ends by blooming in the water head downward?

Hints on Vases, Statues, etc., for Gardens.

In works of art, like the vases we pictured in a former number of the *Agriculturist* (March, 1861), the vase itself is the principal thing. The base and pedestal are subordinate; they are simply the means of raising it from the ground, and supporting it where it can easily be seen. Hence, they should be of coarser material than the vase; coarser because they are designed to come in contact with the rough earth, because they are to serve as foundations, and because they will thereby set off to better advantage the costliness and delicate beauty and fine workmanship of the vase. And the same difference should appear between the statue, or other figure, and the pedestal on which it stands.

If, then, this principle is a correct one, it would seem that our manufacturers of iron, and terra-cotta vases, etc., err, on the score of propriety and taste, in sending out their wares painted all of one color from top to bottom. To our view, a perfect arrangement requires that the base, rising from three to six inches above ground, should be of granite or limestone, resting on a solid pier reaching below frost. The pedestal, if of iron, should be painted and sanded so as to represent some corresponding material, such, for instance, as red or brown sandstone, indicating, perhaps, a little refinement upon the rough base. Then, the vase itself should be of the purest white, to represent marble. We question the propriety of sanding the vase, at least unless it is quite a plain one, for the sand fills up the finely wrought lines, and defaces and blurs over what ought to stand out in clear relief. It also gives the vase a roughness inconsistent with the idea of polished marble. It is a debatable point whether a vase or other figure should be painted a dead white or with a gloss. The first gives a more marble-like look; the latter protects the iron best.

Many persons no sooner get a vase into their grounds, than they fill it with soil and set out plants in it. Small and very plain vases may be so used as flower-pots, but large and finely wrought specimens should be regarded rather as pieces of sculpture, and be kept inviolate and

in the most scrupulous neatness. They are copies of great works of art, beautiful in form and symbolic device, interesting from classical associations, and so, worthy to be carefully preserved and contemplated for their own sake—not for the perishable flowers they happen to contain.

THE HOUSEHOLD.

Good Butter in Winter.

For the benefit of my lady friends, I will give my experience of twenty-five years, in making nearly as good butter in Winter as in Summer. In the first place, we suppose the cows to have been fed on good feed. After the milk has been strained, put it on the stove to heat, either in the pans or in any other way thought proper. Do not make it too hot, or the cream will not rise; it may then be placed in a clean cellar, free from vegetables or any thing that will give the cream an unnatural taste, or in a cupboard with a canvas door, in a moderately warm room; if in the latter place, it should not be put in until the steam has passed off, otherwise the shelves will be liable to mould. The milk should not stand longer in Winter than in Summer, or the butter will be bitter. In 36 or 48 hours it should be skimmed, if in a cool place, sooner if in a warm one. If the milk is thought to be too rich to give to the pigs, let it stand longer, and use the cream that rises on it for shortening or in some other way than for butter.

If the milk has been kept in a cool place, take the cream to a warm room a day or two before churning. If you wish the butter to look and taste like grass butter, grate orange carrots, put some hot water or milk to the pulp, strain and add it to the cream, which should be a little above 60° when you commence churning. A common sized teacupful will color six pounds of butter. After churning, draw off the buttermilk, put cold water in the churn, and churn a few minutes, and if managed right, you will never fail of having good butter. I rejoice that the prejudice against washing butter with cold water is slowly passing away. Heating the milk I believe is an English method, and ought to be more generally practised, then there would not be so much poor butter in the market. So says a BUCKS CO. FARMER'S WIFE.

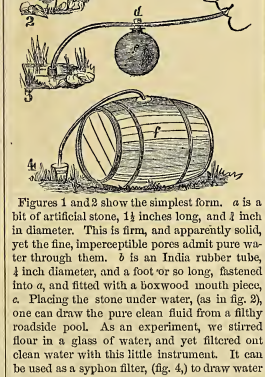
Eaglewood, Pa.

Mica Lining for Butter Boxes.

A novelty that promises to be useful, has been exhibited at the *Agriculturist* Office, in the form of wooden butter boxes lined with *mica*. (This is the material used for transparent stove doors, lanterns, etc.; it is popularly but wrongly called isinglass, from its resemblance to that substance. Isinglass is a translucent glue or gelatinous substance, prepared from the intestines of fishes, and used in cookery for jellies, charlotte ruse, and similar purposes.) Mica is found abundantly in some quarries. Thin sheets of it, closely joined, are placed on the inside of the butter boxes; these effectually prevent any taste from the wood, and being a very poor conductor of heat, may assist in this way also to preserve the butter. The patentee, A. T. Peck, of Cortland Co., N. Y., adds a hinged cover, with a rubber band around the edge to exclude air. These boxes would answer well for keeping bread and cake moist. It is claimed that they can be made of all sizes, nearly as cheaply as good butter tubs or firkins. If as valuable as they appear to be, they should be largely manufactured at once, and an ample supply thrown into the market.

A Simple, Cheap, Convenient Pocket Filter for Soldiers and Others.

While crossing the ocean last Summer, the water brought up on one occasion was so roiled with sediment as to be disagreeable. An American lady of our company at once took from her reticule a little apparatus which could be packed in a large match box, and filtered the water perfectly clean from the pitcher into a tumbler. We tried to find one of these filters in London and Paris, but did not succeed. On coming home, we found them at a few places in New-York; but though said to be patented, we have been unable to learn the name of the patentee, or to find any one specially interested in bringing them before the public. We have therefore purchased one, and made the engravings at our own expense—for the benefit of the inventor, the dealers, and all concerned, and especially for our soldiers who are often obliged to go thirsty or obtain drink from filthy pools of water.



Figures 1 and 2 show the simplest form. *a* is a bit of artificial stone, 1¼ inches long, and ⅞ inch in diameter. This is firm, and apparently solid, yet the fine, imperceptible pores admit pure water through them. *b* is an India rubber tube, ¼ inch diameter, and a foot or so long, fastened into *a*, and fitted with a boxwood mouth piece, *c*. Placing the stone under water, (as in fig. 2), one can draw the pure clean fluid from a filthy roadside pool. As an experiment, we stirred flour in a glass of water, and yet filtered out clean water with this little instrument. It can be used as a syphon filter, (fig. 4,) to draw water from a cask, pitcher, or pail, into another vessel. To do this, immerse the stone, suck until the water is started, then depress the mouthpiece below the level of the fluid drawn from, and a stream of clear water will continue to flow. Another good suggestion, made by the artist, (Dr. Newberry,) while sketching the above, is, that a wounded soldier, having one of these tubes, can draw water from a tumbler or canteen, while lying upon his back, without raising his head. They are retailed at 50 cents each, and wholesaled somewhat less. The weight is less than 2 ounces; they can be packed to go by mail within 2 ounces, making the postage only 12 cents, under 1,500 miles. We have sent several to our friends in the army, and until they are on sale generally, will procure and send them, post-paid, to any address desired, for the retail price, (50 cents), as we can buy enough cheaper at wholesale to about cover the postage.

Fig. 3, is a new modification, just out, in which the rubber tube is about two feet long, and at *d* is fitted a cap with rubber washer, so arranged that by turning off a nut, and pressing the rubber washer firmly over the mouth of a bottle or canteen, (*e*,) the water, instead of passing on into the mouth, falls into the canteen. This will enable the soldier to fill his canteen with filtered water at pleasure. This form costs 75 cts. at retail, and weighs 3 ounces, making the postage 18 cents. We can forward them post-paid for about 80 cts. They are very desirable, but the lighter, cheaper form, fig. 1, will perhaps be as good for the soldier, who dispenses with every ounce of weight and inch of bulk possible. We have only spoken of them as being useful to the soldier; they are of course useful to any one having occasion to filter water for drinking.

High-heeled Shoes are Bad.

Can any tall person give a good reason for wearing high-heeled shoes or boots? In the case of persons of short stature there may be an excuse, if not a reason for the practice. Every one naturally desires to stand up to the average hight in community, and an extra inch of leather under the heel is perhaps as inexpensive a way of gratifying this vanity as can be devised. Yet it costs more than may be generally supposed—more we think than the benefit(?) derived can balance. The arrangement is clearly an unnatural one. The untortured foot of a child forms an arch, with the heel and the "ball" for the abutments, which rest squarely upon the ground. In the natural position, much of the weight of the body rests upon the key or top of the arch, which from its elasticity partly yields to the pressure, and thus acts like a spring to relieve the jar which walking, running, etc., would give to the whole frame. Now when one abutment of the arch, the heel, is raised from its proper level, the weight above is partly thrown from the top of the arch where it belongs, on to the heel, and thus the step is rendered less elastic, and more jarring is given to the frame. The increased shock is very slight, it is true, but the constant repetition of even this, which occurs in the every day exercise of the feet, will in time make itself felt. This is more to be apprehended from the fact that the spinal column which is directly affected by any such jar, is the most important center of nervous influence, and extremely sensitive to any unnatural treatment.

But even if no danger be feared from the above effects, there are palpable evils to the foot itself, resulting from wearing high heels. By their use the foot is forced forward into the shoe, crowding the toes against the leather, which very soon results in corns, bunions, in-growing nails, and all the evils which have called into existence the race of corn-doctors and chiropodists. This difficulty is still further aggravated by the absurd fashion of "stub-toed" shoes, which has been prevalent for sometime past. To prevent the foot thus sliding forward, shoemakers often fit the shoe tight upon the instep. This interferes with the free movement of the muscles and bones of the foot, impedes the circulation, produces cold toes, and general discomfort.

Another objection to high heels, of no small importance, is the danger from falls which they occasion. We have known several serious accidents caused by the heels catching upon the edge of a stair and sending the wearer headforemost down the whole flight. It is to be hoped

that all the readers of the *American Agriculturist* are so sensible as not to follow the absurd whims of fashion, yet some of their neighbors may be benefitted by the hints above given, if conveyed to them. A single layer of leather under the heel to receive the extra wear, is all that should be allowed, excepting in the cases of those very short people who can rise in the world by no other means; they may be permitted to suffer corns and risk their necks if they insist upon it.

Down Spreads Better than Cotton Comforters.

To the Editor of the American Agriculturist:

In a former number of the *Agriculturist* I noticed an objection to cotton comforters on account of their weight and bulk in washing, and lamb's wool blankets were recommended instead. I object to blankets because it takes so many to render a bed comfortable in cold weather. I would recommend down spreads, both for cheapness and convenience. Last winter I experimented with one down spread, containing one pound and a quarter of down, and two cotton comforters, each containing six bunches of cotton batting, and the result was, the down spread kept our bed warmer than the *two* comforters.

Now let us count the cost of each, saying nothing about the extra work to make the two.

1½ lbs. down $1.00 per lb.	1.25
16 yds. calico, 12½ cts. per yd.	2.00
1 bunch cotton batting	60
Total of one down spread	$3.85
6 bunches batting 60 cts. each	$3.60
16 yds. calico 12½ cts. per yd.	2.00
Total cost of one comforter	5.60

Lamb's wool blankets enough to make a bed comfortable in extreme cold weather, of course would cost more than either. A down spread is as easily washed as a single blanket, for when the down is wet there seems to be nothing of it. For the benefit of such as may never have seen this article, I give the directions for making.

Prepare the cloth as for any comforter, tack the lining upon the quilt frames, lay a border of cotton batting; now put on the outside, and tack it down around the edge; then quilt a line along the upper edge of the border to keep the down out of the cotton. Finish the border according to your taste, take it off the frames and bind it. Then baste the mouth of the sack containing the down around the space left in one of the seams of the spread shake the down from the sack into the spread, and when the sack is ripped off and the seam sewed up, the comforter is done.

In spreading it upon the bed, much trouble will be saved by shaking the down all to the front side, then spread it smoothly and put the outside quilt on before shaping the down; then gently pat it to its proper place as in shaping a light feather bed. A FARMER'S WIFE.

When to Peel Potatoes.

A subscriber asks of the *American Agriculturist* the decision of a mooted point between himself and wife, as to whether potatoes should be peeled before or after cooking. One party argues that it is necessary to remove the skins before boiling, to permit hurtful gases to escape, and to allow the water to enter the potato, to cook it thoroughly.

As to the gases, there need be no fear. Good sound potatoes contain no gas that is noxious. Instead of opening a way for the water to readily enter the potato, we think it desirable to keep it out as much as practicable. Potatoes contain water enough in their composition to answer all purposes for cooking, as is seen in the moist substance of a baked potato, which is generally conceded by almost every body to be better than the boiled article. Youmans, in his "Hand-book of Household Science," states that a pound of the substance of this vegetable is composed of about three quarters of a pound of watery juice, to two or two-and-a-half ounces of starch. The tissue of the potato consists of a mass of cells, each of which contains some 10 or 12 starch grains loosely situated and surrounded by the potato juice, which contains albumen. In cooking, the water of the juice is absorbed by the starch grains, which swell and often burst the cells. The albumen coagulates and forms irregular fibers. There is, then, no necessity for letting water enter the potato through openings made in the skin.

Even if potatoes boiled whole were no better than those peeled before cooking, economy would decide in favor of the former practice. Part of the substance is necessarily wasted by peeling raw. It also takes more time than after cooking. From these considerations we decide in favor of leaving the skins uncut until removing them from the pot. They will keep hot much longer if the skins are left until used at the table; but it is generally thought preferable to mash and otherwise prepare them before placing them before guests. *

Use More Corn in Cooking.

IMPORTANT HINTS TO ECONOMICAL HOUSEKEEPERS.

Will the ladies please look a moment at the Market Report, and note the difference in the selling price of a bushel of Wheat and a bushel of Indian Corn. In the New-York market, at the time of this writing, the best white wheat is quoted at $1.47 per bushel; the best corn at 64 cents per bushel.—Now we hesitate not to say that, after grinding and bolting, a bushel of corn will furnish fully as much solid nutriment as a bushel of wheat; that is, $1 expended in corn will buy as much nutriment as $2.30 expended in wheat. As the cost of transporting a bushel of corn is about the same as for a bushel of wheat, the difference in favor of the corn is much greater at the West. Thus, at a point distant enough to make the cost for transporting a bushel 47 cents, the wheat would be worth $1, and the corn 17 cents—a difference of nearly six to one in favor of consuming corn and selling wheat.

Another fact should be remembered. Europeans want all the wheat we can spare, and will pay a fair price for it. As they have grown little corn, they have not yet become accustomed to its use. And still further, corn does not bear transportation in ships as well as wheat, which operates against large exports of the former. Corn contains more oily food than wheat, and is therefore quite as well adapted for food during the six or seven colder months of the year, when heat producing food is required. The only difficulties in the way of the more general use of corn, is the prejudice against it, and the comparatively little attention given to the best modes of cooking it in palatable, digestible food. We again urge our fair readers to look into this matter. Try different recipes, until some one or more methods are found which prove palatable to the family, and are economical withal. Some of the methods of cooking corn meal in vogue, require a considerable admixture of eggs, milk, etc., which diminishes the economy, though it is to be remembered that a larger application of butter, or gravy, is required on good wheat bread than on good corn bread. As a rule, the butter in a family costs more than the flour. In the *American Agriculturist* for January and February of this year (1863), may be found over a hundred different modes of cooking corn meal, including the prize recipes. Now that cold weather is approaching, we urge our readers to turn back to those directions and see if they can not select some good methods by which they may largely increase the use of the more economical corn in their families.

Good and Cheap Corn Bread.—E. Dickerman, of Middlesex Co., Conn., contributes the following to the *American Agriculturist*, with the remark that he thinks it will be found quite as good as any thing yet published. "We have had it put to practical test, and can endorse it as very good.) Mix thoroughly together 5 cups Indian meal, 3 cups wheat flour, 5 cups sweet milk, 2 cups sour milk, 1 cup molasses, ¾ tablespoonful soda, (first dissolved in the sour milk), 1 tablespoonful salt. Bake in two deep pans for 2 hours. Half the above quantities will be enough for a meal for an ordinary family.

Corn Breakfast Cake.—A housekeeper contributes the following to the *American Agriculturist*, with a sample of the result for the editor, which he pronounces "not bad to take." The writer says: "My cook, Kate, is to be credited with the mixture if you like it": Mix well by sifting, 1 pint Indian meal, 3 tablespoonfuls wheat flour, 1 tablespoonful sugar, 1 teaspoonful salt, 1 teaspoon ful soda, and 3 teaspoonfuls cream of tartar. Mix rapidly and thoroughly with 1 pint sweet milk, 1 beaten egg, and butter the size of an egg. Bake in a shallow pan, 20 minutes, in a hot oven.

Important Hints on Cakes and Biscuit Making.—An old contributor of good hints to the *American Agriculturist* gives the following. They stand to reason: My observation is, that very few housekeepers are aware of the importance of *thoroughly mixing* the ingredients of cakes, biscuits, pie-crust, etc. Where salt, soda, and cream of tartar, are used, a little more of one material is usually left in one part of the flour than in another, and unevenness of taste or lightness, is the result. It is always better to put all dry materials into the flour or meal dry, and mix them well, then always run the whole over once or twice through a sieve before wetting. All lumps are thus broken up, and the mixture is uniform. Let the wetting then be done with all materials cold. Let it be done rapidly and thoroughly, and just before baking. If put into a hot oven at once, the outside is hardened and retains the gases to make the whole light. The after baking should be rapid, but not so much so as to burn the crust; the point is to harden the shell at first before gases escape. Heat liberates these gases rapidly; hence the direction to mix the materials cold.

Biscuits—Crackers—Rolls—Amusing Mistake.—An amusing instance occurred during our stay in London, the past Summer. The English people do not use the term "cracker" as applied to food. They use the general word "biscuit" for all kinds of hard bread, such as are called by us crackers, sea-bread, etc.; while they call our biscuits and other small bread by the general term of "roll"—as breakfast rolls, tea rolls, etc. A lady traveling friend of ours sent out the servant to procure a couple pounds of "Soda crackers" for tea. She was gone a long time, and finally came back with her basket saying that she had been all over and could find no "Soda crackers," but here was the nearest thing to them she could get. On opening the basket it contained two pounds of *fire crackers!* If our friend had sent for soda biscuits, the soda crackers would have been quickly procured at the nearest baker's. This happened near the 4th of July, so that the mistake was not very *mal apropos*, after all.

Good Tea Biscuit without Milk.—The following, contributed to the *American Agriculturist*, we know to be good, having tested excellent samples of the biscuits, or rolls, produced: Mix and *sift well together*, 1 quart flour, 1 teaspoonful soda, and 2 of cream of tartar, with salt to taste. Use butter the size of an egg, and water only to mix it of proper consistence.

Vinegar Recipe.—A correspondent of the Scientific American says: "To one gallon of soft water, add a pint of sugar, or sorghum molasses, stir all well, and then add nearly a gallon of tomatoes, fresh and ripe. Then set the vessel aside, and in a few days you will have the sourest pickles I ever tasted, and nearly the best vinegar."

Cement for Roofing.—"J. L." of Setzler's Store, Pa., inquires how to make a good cement for roofing. We suspect a good many *manufacturers* would like to know the same thing. The article is in the market in great variety, but we know of nothing that we should like to recommend. A good shingle, slate, or well painted metal roof, is generally cheapest in the long run.

The Editor with his Young Readers.

LETTERS FROM MR. JUDD....NO. III.

(*Concluded from page* 313.)

[Below is a small portion of the outline map of London, but it will be better for all to read what follows with last month's full map before them. The maps are drawn to a scale of about a mile to each five-eighths of an inch.]

The large white spaces *N, O, H, W,* represent the four largest Parks of London. These are really grand parks, occupied by small forests and clumps of trees, large grass plots (some containing dozens of acres,) walks, carriage drives, artificial lakes and ponds, etc. There are several smaller parks of a square or so, with trees and grass plots.

Hyde Park, N, is one of the most noted of London. Its Western end is called Kensington Gardens, or Park. Hyde Park contains 388 acres, and Kensington Garden 356, or in both 744 acres. As they join together you will see that here in the midst of London is an open "breathing place" as large as five farms of about 150 acres each. An artificial lake or river nearly a mile long and averaging about an eighth of a mile wide, lies nearly in the middle, curving around towards the northwestern side. On this are pleasure boats in great numbers, and on fair days thousands of people are seen around its sides. Along the south side of Hyde Park is a broad carriage drive, where a great number of the wealthy classes ride out in their splendid carriages, from 4 to 6 o'clock, P. M. Just north of this is a long drive where gentlemen and ladies ride on horseback; though a beautiful road it has the ominous name of "Rotten Row." Broad lawns intersected by gravel walks and drives, and beautiful groves, occupy Hyde Park. (The old Crystal Palace of 1851, stood near the southeast corner. This was taken down and removed 7 miles south, to Sydenham, where it fronts upon a magnificent park, grand fountains, play-grounds, etc. The International Exhibition of 1862 is at *P*, on our map. This is not a Crystal Palace; its walls are of brick, but most of its roofing is of glass.) Kensington Garden or Park (*O*), has many trees, with wide avenues or streets between them. It has one quite large forest of old trees, in the tops of which I saw a flock of thousands of crows, apparently at home, though almost in the city. Hardy trees from all parts of the world are growing in Kensington Park, and almost all varieties of hardy trees, shrubs and plants grow along the double border on the south and west sides. These trees and plants are labeled with the common and botanical names, and with their origin, so that one can here studythe arboriculture and much of the botany of the rest of the world.

Regents Park (H), containing 472 acres, is another fine rural place in the northwest part of the city. This has larger lawns with cattle and sheep grazing, a very irregular lake with small islands, a botanical garden, a drive around it 2 miles long, some villas, etc. The most interesting portion to me, is the noted Zoological Gardens (*J*) in the north part. There are hundreds, perhaps thousands of animals, birds, water fowls, reptiles, etc., gathered from various countries, and living here as nearly natural as may be. The lions, tigers, bears, and other fierce animals are in large cages. The fowls and birds are in spacious yards or enclosures surrounded on the sides and above with wire netting. Pelicans, Ostriches, Swans, Birds of Paradise, Elephants, Rhinoceros, Zebras, all kinds of deer, grouse, all kinds of monkeys, seals in ponds—In short most of the beasts, birds and reptiles known, are kept alive in these grounds. I spent a whole day among them and was not half satisfied. I am sorry to have so little space to tell you about them.

Victoria Park (W), or old "Bethnal Green," in northeastern London, is shaped somewhat like a stocking, and contains 265 acres (a large farm). This is a great play-ground without many walks or drives. On a Summer afternoon there are sometimes 30,000 to 40,000 people here, engaged in cricket, archery (bow and arrow shooting), and other games and sports.

St. James Park of 91 acres, shaped like a boy's kite, lies east of and adjoining the Queen's residence, or Buckingham Palace (*M*). This has a beautiful lake, exquisite gardens, etc., which I have not room to describe. *Green Park* of 60 acres, mainly an open green lawn, lies around and west of *M*, cornering on Hyde Park. These parks, and the smaller ones not referred to, contribute much to the health of London, and add to the beauty of a city which would otherwise be gloomy indeed.—I should have noticed *Battersea Park (R),* an open space of 185 acres on the south side of the Thames river. It is mainly a play-ground where thousands of persons play cricket or "ball," and other athletic games. In a portion of this was held the great Show of the Royal Agricultural Society of England, one of the leading attractions that brought me here this Summer.

The Bank of England (A), is about ¼ mile north of London bridge, and is the great commercial center of the city. The building is massive, low, and its rooms and courts cover about 4 acres! It contains constantly from $85,000,000 to $90,000,000 in gold, and circulates notes to the amount of $70,000,000. These notes are larger than ours; they are very plain, having but few words, or pictures on them, but are printed on a peculiar paper; each one is numbered, and never re-issued, the old notes being destroyed whenever they come back to the bank, and new ones sent out. The specie, when received and paid out, is counted into scales and weighed instead of being counted. There are some 900 clerks who receive over $1,000,000 in salaries; yet the bank makes a clear profit of about $125,000,000 a year, which is paid in dividends.

St. Paul's Cathedral, or Church (C), is nearly ¾ mile north of the river, and ½ mile west of the bank. It is of stone, 500 feet long from east to west, the main part about 100 feet wide, with a transept under the dome, east of the middle, making the ground plan somewhat like a cross. Two turrets or steeples on the west corners are each 222 feet high. The central dome is 404 feet high to the top of the cross, which stands upon a ball. This ball looks very small, yet I went into it with three other persons, and by a little crowding as many more could have found room. The dome and the whole building are so massive and well proportioned, and so surrounded with other buildings, that the Church does not appear large, except when seen from a distance on a clear day; then it looms up above the city in all its grandeur. There are a number of statues and monuments within and under the church. Lord Nelson is buried here; also the Duke of Wellington, and other eminent persons, warriors and statesmen, but no divines, as one would expect to find. One can go all over the church, on paying 3*s.* 2*d.* (about 78 cents).

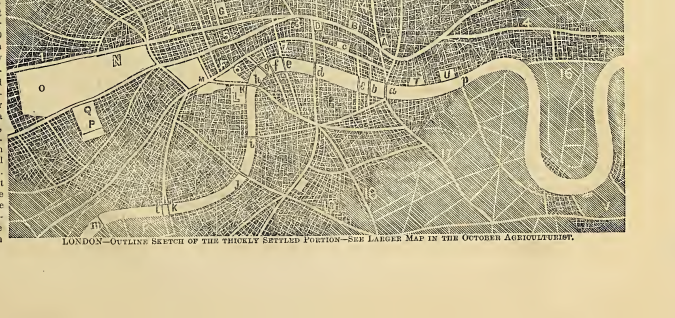
The House of Parliament (K), is on the west side of the northern bend of the Thames, about 2 miles above old London Bridge. Its river front is 900 feet in length, adorned with rows of statues, paneled tracery, shields, etc., all cut in stone. On the southwest end is a tower, 75 feet square and 340 feet high. A central spire is 60 feet in diameter and 300 feet high. The Clock Tower on the northern end is 60 feet in diameter and 320 feet high. The clock face is 30 feet across. The building covers nearly 8 acres, contains 1100 rooms, 100 stair cases, and more than 2 miles of corridors or halls. There are nearly 500 statues in the building, of stone or marble, and a great number of paintings. The first stone was laid in 1840, and the whole structure cost over $10,000,000. The House of Lords or Peers, and House of Commons meet in two rooms,—the former 97x45 feet, and 45 feet high, profusely decorated in gold; the latter 62x45 feet, 45 feet high. The members of Parliament meet towards evening, and sit until after midnight. They sit with hats on, on long seats without writing tables or desks. A ticket from the American Minister admitted me to hear the debates.

Westminster Abbey, at *L,* near the Parliament Houses (*K*), is to many persons one of the most interesting places in London. It is a very old Church, founded in A. D. 616, or 1246 years ago. All the kings and queens of England, since its founding, have been crowned in this church, and most of them have been buried in it, together with many eminent statesmen, divines, literary men, poets, and generals. The walls are covered with portraits and statues of those buried here, and of historical scenes painted on canvas, or cut in stone or marble. There are nine little side chapels or rooms, containing the remains of kings and others, most of which have tombs or tomb-stones, some of them very elaborately carved, and some very grotesque. I recall the tombs of several King Edwards, and Henrys, and James; Mary Queen of Scotts, Queen Anne; Lords Clarendon, Chatham, Pitt, Fox, Canning; the Poets Chaucer, Dryden, Addison, Sheridan, Campbell; the Musician Handel, etc.

Buckingham Palace (M), is Queen Victoria's city residence. (Her country residence is at Windsor Castle, or Palace, on the Thames, a few miles west of London, where she spends the greater part of the year. I visited the farms of the late Prince Albert, near Windsor. Buckingham Palace is ¾ mile west of the Parliament Houses. It is like a large dwelling house, with many fine rooms, paintings, and statuary. People live, eat, and sleep there, just as they do in other houses, having rather more costly furniture, and a larger retinue of servants. Around the palace are beautiful grounds, groves, artificial lakes, statuary, fine walks, etc.

The British Museum (G), is the most interesting of all buildings in London. It is an immense square structure, with a great number of rooms filled with a vast collection of different objects. There are here more than half a million books, besides old manuscripts, and parchments, works of art, minerals without number, Layard's collection from Nineveh, others from Egypt, preserved animals of all kinds, etc., etc. It would be useless for me to attempt to describe this museum. One could spend weeks here without examining all the things to be seen.

The Tower of London (T), is on the bank of the river, ½ mile east of London Bridge. This is more a fort or castle than a tower. It consists of a little over 12 acres, enclosed by high, thick walls, and a deep, broad ditch or moat. Inside of this is another wall, with low towers at its angles. Within the enclosed large space is a long row of soldiers' barracks on the north side. About the middle is the "White Tower," or simply a massive stone building which contains several rooms filled with old armor, coats of mail, spears, battle axes, guns, pistols, etc., representing the kinds of armour and weapons in use in different periods of the past. Here are also the old instruments of torture, beheading axes, blocks, etc. In the center of this is a dark dungeon or cell where some noted persons have been confined. In the northeast part of the enclosed space is a small, but heavy-walled building, called the "Jewel Tower," in which is kept the Crown of England, in a large, high glass case, with other lesser crowns, diamonds, jewels, golden vessels for royal baptisms, etc. Visitors go all through the tower, and see the armor, crown, etc., on paying 25 cents. On the northwest side, forming a part of the inner wall, is an old prison room, where Lady Jane Grey and other eminent persons were incarcerated. Looking out of the window to the open space, you see the place where she was beheaded. The ax, and the block with the deep cut made by the ax, are preserved in the White Tower. In some of the rooms of the Castle or Tower of London,



LONDON—OUTLINE SKETCH OF THE THICKLY SETTLED PORTION—SEE LARGER MAP IN THE OCTOBER AGRICULTURIST.

WHICH IS THE TALLER?—*(Engraved for the American Agriculturist.)*

Thoughts Suggested by the Picture.

What boy does not wish to be a man? Certainly not the one in the picture. He is anxious that his grandmother shall think him a large boy, much larger than his cousin. They have already measured once, and John stood an inch highest, but his grandmother remembered that John's shoes had high heels, while Kate's had none. So both took off their shoes for another trial. Kate does not seem to care much if John is taller, for she takes no pains to hold up her head; but see how John straightens up, and the rogue is on tiptoe, which his grandmother does not perceive, so she thinks he is really outgrowing Kate, although she can hardly believe her eyes. John is as much in play as in earnest, as you can see by his roguish look, but boys often try to deceive others into an acknowledgment of their manliness, much to their own harm. Some make the great mistake of supposing it is manly to disobey their mothers: "breaking away from mother's apron string" they call it. Breaking their mothers' heart strings they should say, for that is what a disobedient boy has commenced to do.

The man who stands foremost in the history of this nation, the immortal Washington, up to the day of his death, showed the most sincere veneration for, and affectionate obedience to his mother. It is related that at one time they were attending a ball given in his honor at Philadelphia, and when 10 o'clock arrived, his mother took his arm, and said, "Come, George, it is time to go," and the great man immediately accompanied her from the crowded assembly. This filial obedience in good part made him what he was. Had he thought it manly to have his own way, he would have been an officer in the British navy. When a boy he was about to enter that service as midshipman. His mother, seeing his heart set upon it, had given a reluctant consent. Every thing was ready, and he was about to start, but he saw the grief of his mother, and refused to disobey even her wish.

We have seen boys trying to be manly by smoking, swaggering, and even swearing. What a mistake they make. (The veriest coward can easily practise such vices: but it requires a courageous, manly boy to maintain a good character, particularly if surrounded by bad examples.) Such boys deceive only themselves. No one else thinks them one inch taller or one whit more like men.

Who can help liking the sweet, mild countenance of little Kate, in the picture. She is content to appear just as she is, and is entirely willing that her cousin shall pass for her superior. She gains much more by her humility than he does by his trickery. And so you will find it in life. Those who are content with appearing just as they are, will escape criticism and secure favor; while those who try to seem great, will only deceive themselves and make enemies among those around them.—Remember well, that a habit of deception grows from small beginnings. John, in the picture, is playing deception now. Another time he will verge a little upon actual deceit; another time he will go further. Keep your conscience sensitive by avoiding the slightest act like deception.

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have been confined, and some of them beheaded, many persons noted in England's past history—Wallace, Mortimer, King John, Queen Anne Boleyn, Cranmer, and others, Kings, Queens, Princes, Bishops, Generals, etc.

Thames Tunnel (at *p*), is still a curiosity, though pecuniarily a failure. You pay a penny (2 cents), go down a great circular room by 100 stone steps around the wall, and then through an arched passage 1200 feet long, under the bed of the river. The passage is large enough to drive a large load of hay through. Another similar passage way by the side of it is not used now. Between these are pillars, and between these pillars are about a hundred shops, where are sold toys, trinkets, refreshments, etc. The bed of the tunnel arches upward a little in the middle, so that you can not see through the whole length. At the other end, you go up a hundred steps and land on the opposite bank of the river. The walk is cool, not so damp as I expected to find it, and one feels a kind of thrilling sensation when walking under the river, with perhaps great ships floating directly over his head.

Woolwich Arsenal and Navy Yard, corresponding to our Brooklyn Navy Yard, is on the south side of the Thames, 4 or 5 miles below Greenwich. *At Greenwich*, (*Y*), I visited, besides the celebrated Observatory before referred to, a large Naval Hospital, where the government provides a home for her worn out and wounded seamen. Some old soldiers are here also. I was much interested in seeing 1300 of these old men, a majority of them crippled, gather into the great dining halls, and there receive their noon "rations,"—a basin of meat and soup, and a large piece of bread for each. In a chat with one of these old men who had spent 38 years in the English army, it came out that he was, during the war of 1812, in the very battle in which my own uncle, after whom I was named, was killed, and in which my father escaped death by the ball aimed at his breast being glanced off by his musket stock in front of him. The meeting was a strange coincidence surely! In this hospital are some of the finest paintings of battle scenes, of warriors, of soldiers leaving their homes, and of deaths of generals and commodores, and singularly enough, some of the best of these, so acknowledged by all, were painted by our own countryman, Benjamin West, who when a boy began with charcoal sketches in Philadelphia.

Billingsgate, the great Fish Market, on the river just below London Bridge (*b*), is in one sense interesting to a visitor, at 5 or 6 o'clock in the morning. A great number of men and women are then selling fish for other markets, and the loud noise and foul language heard, especially from women, gave origin to the word "billingsgate," now used to designate any foul, slanderous talk.

City Road, (14, 14,) running north from the Bank, and bending round west, furnished an interesting walk. On the west side, at the lower fig. 14, is the old "*Bunkill Fields Burying Ground*," of less than 4 acres, in which have been buried **107,416** persons whose names are registered, besides many others not recorded! I noticed here, among others, the graves of John Bunyan, author of Pilgrim's Progress, Isaac Watts the Poet, and George Fox, founder of the Society of Friends or Quakers, and Mrs. Susanna Wesley, mother of John Wesley. Nearly opposite is the old "Foundry Chapel" or City Road Chapel, where John Wesley founder of Methodism preached. In the small grave-yard adjoining lies John Wesley, Drs. Adam Clarke and Benson the Commentators, etc. (I had an interesting visit to Radnor-street Sabbath School connected with this church, but ½ mile northwest, in a building erected for the school, where 1800 children attend the Sunday and week day schools. I tried to go in unrecognized, just to see *how* they conducted so large a school, but they *guessed* me to be an American, and insisted upon a speech. At their urgent request I talked a little of the war in America, and why and for what we of the North were fighting. The feelings and sympathies expressed by about 200 teachers, and over 500 larger bible scholars who gathered around me, are among the most pleasant remembrances of London, where an American usually finds so little sympathy with his own country in her troubles. The same afternoon I visited the "Field Lane Ragged Schools," at a place not far north of the Post Office (*D*). It was most pleasing to see so many ragged children, and abandoned men and women, brought together and instructed. Better order, or more diligent attention I never saw among any gathering of children. I can not describe several churches I attended, such as Rowland Hill's Chapel, on Blackfriar's Road, south of the bridge (*d*), now occupied by Rev. Newman Hall. Spurgeon's Church, as before stated, is still a little further south. The Church of Dr. Punshon, (the most eloquent preacher I ever heard) is in Highbury, in north London. Dr. Cummings' church is close by Covent Garden Market, near the figure 7 on the map, Covent Market is noted for its flowers, fruits, and vegetables.

But I must close. I would like, if I had room, to tell you much more about the things already described; about the general Post Office (*B*), and the way they gath er up letters and deliver them to the houses in every part of the city, and every where in Great Britain, for a penny (2 cents), not waiting for anybody to go to the Post Office, or to look for their letters, about the Royal Horticultural Society's new grounds at *Q*; the bridges over the Thames, from *a* to *m*; about old Newgate Prison at *D*; about the East India Docks, at 16, which extend across the bend of the river (leaving the "Island of Dogs" in the bend); and about a hundred other things that crowded upon my mind. But I must leave London, and perhaps tell you briefly about Paris, and things to be seen in France, Switzerland, Germany, and Belgium.

Peter after a Rabbit.

A reader sends the following to the *American Agriculturist*. Two boys, Peter and Lemuel, live in the same neighborhood. One of Lemuel's friends, gave him a beautiful tame rabbit, curiously marked with white and black, to which he soon became greatly attached. He was never tired of feeding and petting it, and exhibiting it to his playmates. Peter often visited Lemuel and played with the rabbit, but this did not satisfy him; he wanted it for himself, and tried to buy it, but Lemuel would not part with it. After long coveting, he took the next step, and resolved to steal what he could not get otherwise, probably thinking he would keep it for a day or two, and then pretend it came to him of its own accord. So one night, just at dark, Peter went cautiously to the garden and crept along through the currant bushes towards the rabbit's kennel. Before reaching it he saw his supposed prize cross the path just before him, and eagerly pouncing upon it, grasped it tightly in his arms. But instantly he was almost suffocated with the odor of a young *skunk* which he had mistaken for the rabbit. To add to his chagrin, just at that moment Lemuel's father perceiving the smell, ran from the house and caught him as he was running through the gate. The story was soon known, and Peter and his rabbit became a byword in the village.

A Horrified Dandy.

A laughable incident is related of a dandy who was seated on the balcony of a Saratoga hotel, among a large company. He was exquisitely dressed and very highly perfumed with musk, which is very disagreeable to some persons. A plain farmer happening to pass near him, commenced snuffing suspiciously, and looking around for the cause of the musky effluvia, he soon smelt out the dandy, and thus addressed him: "I say mister, I can tell ye what'll take that smell out of yer clothes. Just bury 'em under ground for a week. My uncle run agin a skunk once and he"—— but before the sentence was finished the enraged dandy sped from the crowd to escape the shouts of laughter, while the innocent farmer who only meant to do him a kindness, was wondering what caused his sudden departure.

"Blue Hen's Chickens."

We have long known that the people of "little Delaware" were called "Blue Hen's Chickens," but could not tell why. At our request, Rev. Dr. Coombe, of Philadelphia, a native of Delaware, furnishes the explanation for the *American Agriculturist*, as follows; In the olden time there was in that State a breed of fighting cocks, noted for their pluck and endurance. They never knew when they were whipped, but would fight on as long as there was a feather left. The only account of the origin of this breed was that they originally sprung from a blue hen.—In the Revolutionary war (1776–83), Delaware furnished a regiment of soldiers, which in numerous marches and battles became distinguished for persistent bravery. On this account they came to be called the "Blue Hen's Chickens." The name thus becoming an honorable one, was afterwards assumed by the people of the State.

Curious Change of Names.

A Scotchman named *Feyerston*, settled among some Germans in Western New-York. They translated his name into *Feuerstein*. On his return to an English neighborhood, his new acquaintances discovered that *Feuerstein* in German, meant *Flint* (Firestone) in English, and thus retranslating it, his descendants are called Flint to this day. A grandson removed to a French settlement, where they called him in French, *Pierre, a Fusil*, and his son removing again, was renamed in English, Peter Flint.

A Cool Soldier.

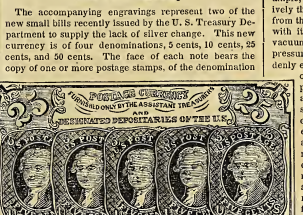
During one of the recent battles, while a regiment of our troops were rapidly marching over a dusty road in changing their position on the field, a soldier noticed a cake of soap at a little distance from the rank, and sprang forward to get it, saying "I shall need it after this fight." The shells of the enemy were falling thickly, and just as the soldier seized the soap, one dropped close by him and exploded, tearing open an immense hole in the earth and nearly burying the poor fellow. Every one supposed he was blown to pieces, but almost immediately he struggled out, begrimed with dirt from head to foot, yet holding on to the soap, and exclaiming, "There, I told you I should need it!" Fortunately he passed through the battle unhurt, and found his well earned soap a great convenience.

An old Illustration, but a Good One.

Two painters were on a high scaffold, in a magnificent Cathedral, frescoing the wall. The master artist had executed a sketch so beautifully that he was completely charmed with it, and while gazing upon it he insensibly walked backward to the very edge of the scaffold. His comrade saw his danger, but feared to seize hold of him or even to speak, lest he should start him back to certain destruction. He had the presence of mind to dash the wet brush in his hand against the entrancing picture. The artist sprang forward, and was in great rage, until he was informed of his narrow escape.....Just so we get absorbed with some object of our affections, and step backward from our upward pathway, unconscious of our peril; then a kind Providence dashes out the beautiful image, to awaken us from our dream-like state, and bring us to a sense of our danger. Thus it is that our nearest friends, or our most cherished earthly possessions, those we are loving too well, are often taken away in mercy.

The New Money.

The accompanying engravings represent two of the new small bills recently issued by the U. S. Treasury Department to supply the lack of silver change. This new currency is of four denominations, 5 cents, 10 cents, 25 cents, and 50 cents. The face of each note bears the copy of one or more postage stamps, of the denomination



shown by the small figures. On the back of each note is a larger figure, showing the exact value in cents, and the inscription: "Exchangeable for United States Notes by any Assistant Treasurer, or designated U. S. Depositary, in sums of not less than five dollars. Receivable in payment of all dues to the U. States, less than five dollars. Act approved July 17th, 1862."—These notes are now being distributed in exchange for those of larger denominations, at the U. S. Treasury Offices in Washington, New-York, and Boston, and will soon come into general use. Silver is so scarce that they are in great demand.

"Shall I Learn to Dance?"

Asks a young reader of the *American Agriculturist*. Certainly, by all means. Commence with the "Quick-step" out of bed in the morning, and keep it up until the "chores" are finished. The boys will of course have a "*cow-drill*" at the barn, while the girls are engaged in a "*country-dance*" in the kitchen. After this, all hands "change," and promenade to school, keeping step to the music of merry laughter. Repeat the same on the way home at night, with an occasional variation in Winter by "tripping the toe" and having a "break-down" in a snow bank. A "reel" now and then will be quite in place for the girls who have learned to spin, but the boys should never think of it. If these and kindred dances are thoroughly practised, they will leave little time and no necessity for the polkas, schottisches, and other immodest foolories of the ball-room.

The Pugnacious Ram.

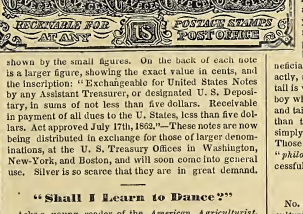
John B. Gough, in one of his eloquent temperance lectures, was encouraging those who signed the pledge to stick to it: "Stick to it," said he, "as the old ram did to his butting." The fable is, that a farmer had a ram which would run his head against the cows, horses, pigs, and indeed against every thing in motion. The farmer himself was more than once butted over, and he finally determined to break up this propensity. So he tied a heavy block of wood upon a rope, and hung it on the limb of a tree. The block was set in motion, and the ram, seeing it move toward him, hit it a blow. This sent it off, but it swung back, when the ram hit it again, and so kept on doing. The farmer watched him until it was dark, and then left him, true to his nature, butting away. Early in the morning, on going out to see how the ram had fared, he found that he had butted himself all away, except a part of his tail, and that was hammering away at the swinging block.—That's the way to stick to your pledge.

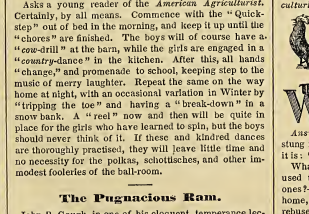
A Funny Mistake.

A little boy asked his mother, what "blood relations" meant. She explained to him that it signified near relatives, etc. After thinking a moment, he said, "Then, mother, you must be the bloodiest relation I've got!"

The Quill and Card Experiment.

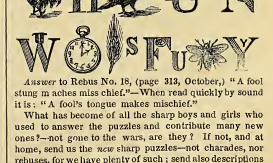
Several of our young readers have sent explanations of this interesting experiment, which was described in the September *Agriculturist*. They agree in saying that the air which is compressed by being driven through the quill, suddenly expands on issuing between the disks, and rushing out in all directions carries with it part of the air separating the disks. This causes a partial vacuum, and the pressure of the air upon the surface of the upper card is greater than that below it; consequently, the card is forced toward the quill, instead of being blown away. Willie Carrington writes that something similar occasionally occurs during hurricanes. For example, when the sides of a barn roof face respectively the North and the South, if a hurricane comes from the North, as it rises over the roof, it carries with it a portion of the air, thus creating a partial vacuum on that side. This partly removes the pressure from without, and the air inside suddenly expands and forces outward the northern portion of the roof. He also describes the following experiment, illustrating the same principle, which any of our young readers can easily try for themselves: Take a piece of thin paper, about ten inches long and two inches wide, and paste the two edges together so as to form a long tube. Insert a cork into one end of this tube, and thrust a common goose-quill, open at both ends, through the cork. The engraving shows the proper arrangement. Now blow hard through the quill, and instead of seeing sides of the paper swell out, as might be expected, you will find that they are forced together by the pressure of the outer air; and they will continue in that position as long as you continue to blow through the quill.—There are many of these philosophical toys, which are both pleasing and instructive. Anything that leads a boy or girl to think, to study into the "*why*," is beneficial. Very few of the boys who fly kites, can tell exactly, *why* the kite rises. The length and weight of the tail is with them a matter of necessity or trial. The boy who looks into the triple action of the wind, string, and tail, and understands them, can make a better kite, than the thoughtless one, who constructs his kite by simply imitating others. It is just so in everything else. Those who in childhood and youth learn to study into the "*philosophy*" of their toys, will be the thinking and successful men and women, when grown to adult years.





Problems and Puzzles.

No. 10—*New Rebus*, contributed to the *American Agriculturist* by W. B. Maccracken, Lancaster, Ohio.



Answer to Rebus No. 18, (page 313, October,) "A fool stung m aches miss chief."—When read quickly by sound it is: "A fool's tongue makes mischief."

What has become of all the sharp boys and girls who used to answer the puzzles and contribute many new ones?—not gone to the wars, are they? If not, and at home, send us the *new* sharp puzzles—not charades, nor rebuses, for we have plenty of such; send also descriptions of new amusements, and anecdotes occurring in your different neighborhoods.

CHILDREN should be well cared for at all seasons of the year, yet in Winter we think it well to "*let them slide.*"

BEAUTIFUL EXTRACT—helping a handsome lady out of a mud puddle.

Is that farmer a ride man who pulls the *ears* of Corn?

"It is said" that in Denmark carriage horses are taught to step high by the substitution of magnifying glasses for blinkers. They mistake every pebble for a boulder, and lift their legs accordingly.—Who says so?

Ram is too good a target to be worn in war. Military and scientific men have decided that soldiers dressed in red are hit 13 times in battle, where those in Austrian gray are hit only 5 times.

Hides are said to be tanned in a few hours by a new process. Our old schoolmaster used to do it effectually in two minutes. We of course speak from observation—not from experience!

"Wake up, here, and pay your lodging," said the deacon, as with the contribution box he nudged a stranger sleeping in a pew.

The road ambition travels is too narrow for friendships, too crowded for love, too rugged for honesty, and too dark for science.

He who swears shows plainly that he distrusts his own word, and thinks others will do so if he does not confirm it with an oath.

There's a plenty of ups and downs in this life. Pendergast once ran for constable, and the next day a constable ran for him. The last ran he got in.

None have been so good, or so great, but have raised themselves so high as to be above trouble. Our Lord was "a man of sorrows."

A poultry fancier lately procured a picture of a favorite hen, which was so natural that it laid on his table every day for several weeks.

DEATH is the only master who takes his servants without inquiring into their previous character.

Fast horses win cups by the use of their legs. Fast men lose their legs by the use of cups.

The man lacks moral courage who treats, when he should cheat.

The wasp attacks the ripest fruit first, so will slander attempt to wound the most honest fame.

A horse that kicks, if he does not bite, is like a crazy old gun—more dangerous at the breech than at the muzzle.

By preparing for the worst, we often secure the best.

A Crooked Nose is but for every man follows his nose.

PREMIUM LIST,

For 1863---Volume XXII.

New Subscribers get the Rest of this Year Without Charge. (*See page* 352.)

Good Pay to Voluntary Agents who attend to Collecting and forwarding Clubs of Subscribers to the American Agriculturist.

(Premiums open to all who Desire them.)

Every subscriber is invited to renew his own subscription, and to solicit others to subscribe. But to all those who will take the trouble to collect and forward clubs of subscribers, we offer a remuneration in the form of *first-rate* articles, as named below. The pay thus offered is much larger than we could pay in cash, though no article is proposed which is not of the best quality, and fully worth the price asked. (We get these articles on extra good terms *when for premiums.*)

Part of the Premium articles announced this month are selected from the best given last year, those which gave universal satisfaction. They are such as will *pay* for the effort to obtain them.

☞ WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ We offer nothing *for competition.* Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing; every one knows just what he or she is working for.

☞ *We make no distinction between new and old subscribers* in giving these premiums, but it is expected that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞ Every person collecting names for premiums, should send two copies of each list of names—one of them marked "For Premiums," and also with the name of the sender.

☞ Every person collecting names for premiums, should send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; but if designed for premiums, two copies of each list of names should be sent—one of them marked at the top "For Premiums," and also with the name of the sender.

☞ The premiums are offered for subscribers for Volume XXII (1863), *whenever received.* Canvassers will have time for completing their lists, but the premium will be paid as soon as any club is made up—if duplicate lists are sent.

☞ Any person who has commenced sending in names at 90c. and finally fails to get the higher number of names, can fall back upon the smaller number, by remitting the 30 cents extra on each of the smaller number of names required. ☞ Clubs need not be all confined to one Post Office.

Table of Premiums for 1863.

Names of Premium Articles.

Price of Premium.	Names at 90 cents each.	Names at 80 cents each.
1—Goon Bookcase *Some terms below*		
2—Best Family Clothes Wringer	$7 50	18	67
3—Nonpareil Washing Machine	$11 00	30	70
4—Sewing Machine, (Wheeler & Wilson)	$75 00	90	100
5—Sewing Machine, (Willcox & Gibbs)	$35 00	60	86
6—Arnold Barometer	$7 00	19	41
7—The Aquarius	$10 00	27	47
8—The Melodeon (best)	$90 00	125	237
9—Do Octave Melodeon (best)	$60 00	104	182
10—Four Octave Melodeon (best)	$40 00	80	140
11—New Cyclopædia, 16 volumes	$18 00	96	140
12—Worcester's *Unabridged Dictionary*	$7 50	20	30
13—Six Sack Volumes Agriculture,	$6 72	16	25
14—Five do do	$5 60	13	20
15—Four do do	$4 48	13	20
16—Three do do	$3 36	10	26
17—Two do do	$2 24		13
18—One do do	$1 12		10
19—Booth's Portfolio Paper Fixtures	$3 23		11
20—Windsor & Newton's Paints	$2 50		20
21—Winsor & Hodgkinson's Paints	$1 50		15
23—Premium Cylinder Plow	$10 00		65
23—Eagle Plow No. 20	$7 25		58
24—Hay and Straw Cutter (best)	$8 00		58
25—Field Cultivator (best)	$5 00		55
26—Family Lard and Wine Press	$7 00		34

Specified in Premiums.

DESCRIPTION OF THE PREMIUMS.

Premium No. 1—Good Books.

This premium will meet the wants of a great number of persons. On page 351 is a list of 58 books, many of them on topics connected with the Farm, Garden, and Honsehold, and a portion of them the very best published. (See remarks in that list.) Any of the books may be ordered, and 16 or more subscribers, may select any of the books in that list, (page 351,) to the amount of 12½ *cents for each name, at the club price of 90 cents, or 10 cents for the amount of 25½ cents for each name, at* 81 *each.* Many farmers' clubs have, during the last year, joined together and obtained a considerable library through these premiums. N. B.—The books will be *delivered* to the recipients, (by mail or express, *free of all cost.*

No. 2—Family Clothes-Wringer.

This is a first-rate household implement—a great saver of garments, and a saver of hard work. Every woman knows that wringing by hand is not only the hardest, wrenching work of washing day, but that the twisting by hand-wringing breaks more of the shers of the garments than the washing and ordinary wear. With this machine set upon the edge of the wash-tub, the garments are easily and rapidly passed between two India-rubber rollers, the water falling back into the tub, and the garments dropping into a basket, in a drier condition than they can be wrung by hand, and therefore more quickly dried on the line. A child can do the work nearly as well as a full-grown clothes. The machine will save its cost several times in a year, simply in the saving of garments. We have had one of the first machines made in the country, and have used it nearly three years, and it is still as good as new. The machines now manufactured are still better, several improvements having been made. The machine figured, No. 2, is the best thing for family use. It is provided with cogs to move the rollers together, so that it is not possible to tear garments, as is the case with cheaper Wringers and provided with cogs. We present one of these No. 2 Wringers to any person procuring and forwarding 18 subscribers, at 81 each, or 37 at the lower club price, (90 cents each.)

Premium No. 3—Best Washing Machine.

Many ladies have asked us, for years past, to introduce a good Washing Machine among our Premium articles, but we have uniformly declined doing so, for want of the right kind of machine. We have, however, purchased a machine worthy of a place in the premium list, in which we mean to put none but those known to be first-rate articles. The **Nonpareil Washing Machine** we have had in constant use in our family for nearly a year past, and it has not only driven out half-a-dozen placed there on trial, but has really given excellent satisfaction. It is the only machine out of twenty we have tried, which the "help" cheerfully use without compulsion. It is a labor-saver and a clothes-saver—two important considerations. (See descriptive and advertisement on page 319.) The clothes are put in, in quantity, and quickly washed by simply turning a crank. The balance-wheel adjusts the force required, so as to make the turning easy. Take it all in all, it is the best Washing Machine we know of, and is worthy of a place in every family. They are of three sizes; we select No. 2, as the best size for common family use. The price of No. 2 is $14. This machine we will present (free by forwarding) 30 subscribers at the regular price, (81 each,) or 70 subscribers at the lowest club price, (80 cents.) The machine can be sent to any point in the land, or by express, and will be delivered free of all expense, except the freight after leaving the city

Premium No. 4—Sewing Machine.

90 Subscribers at 81 each, (or 130 at 80 cents each,) will entitle the person sending in the names to a first-rate **Lock Stitch Sewing Machine,** (including **Hemmer,**) new from the factory, and of the very best make. There is no better machine made than this made, as we have proved by nearly *five years'* use in our own family, in connection with other machines. We want no better. The fact that more of the Wheeler & Wilson machines are sold than of all others combined, is perhaps the best testimony in their favor. The terms on which it is offered above, will enable many families to secure one without direct outlay of money. The Premium Machines will be selected new at the manufactory, and will be forwarded, well boxed, with full directions for setting up and using, and with no expense, except for freight, after leaving the city.

Premium No. 5—Sewing Machine.

60 Subscribers at 81 each, (or 98 at 80 cents each,) will entitle the person procuring them to *Willcox & Gibbs'* $35 **Sewing Machine,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with one thread,) and has several points superior to other machines. It is neat, well made, simple in its operation; and having tested one in our own family for more than two years, we think highly of it, and can recommend it to those who can not afford to buy the higher priced double-thread machines. Some of our neighbors think this machine ahead of all others. Premium 5 Will be selected and sent the same as No. 4.

Premium No. 6—Barometer.

10 Subscribers at 81 each, (or 44 at 80 cents each,) will entitle the person getting up the club to one of *Kendall's* **Anerold Barometers,** (Price $7 50.) This is a good, portable instrument, and valuable to every person as a weather guide, as well as for scientific purposes. We have had one in use for nearly three years, and find it not only accurate, but an admirable weather prophet. Scarcely a rain storm or gale of wind has occurred, that has not been foretold by our barometer. It will save to the farmer and others many times its cost, as a weather-indicator. These instruments resemble a large watch, 5 inches in diameter, and 2 inches thick. Each one is in a neat leather case, and when sent to a distance, this is packed in cotton, in a wooden box 4½ by 8 inches, and can go anywhere, by express or otherwise, with perfect safety.

Premium No. 7—The Aquarius.

This is a capital instrument, valuable to have in every house. It is a force and lift pump, which any one can catch up at a moment's warning, and throw from a pail or other vessel a steady stream of water upon a fire in a house, or elsewhere. It is also provided with both a jet-pipe for use, or sprinkler, and can be used for washing windows, carriages, &c., for sprinkling trees, plants, destroying insects, &c., &c. With it, it is easy to wash the second and third story windows, and to sprinkle water upon the roofs, while standing upon the ground. Such a supply of water often enable a person to so use a bucket or two of water as to extinguish a fire breaking out where it could not be reached with water from the pump alone. It is supplied with suction and injection India-rubber pipes, and with air-chambers to keep up a constant stream. The weight is 8 lbs., and it can be sent anywhere by express. Price, at our express. We estimate this for the Hydropult, as being cheaper, and quite as good. (Price $10.) We will present an **Aquarius** complete to any one forwarding a club of 23 subscribers at 81 each, (or 47 at 80 cents each.) N. B.—Further particulars can be obtained by sending for a descriptive circular to the manufacturers, W. & S. Douglas, Middletown, Conn.

Premium No. 8—Melodeon.

125 Subscribers at 81 each, (or 237 at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$75 Melodeons** (6 octaves). These Melodeons are of very superior tone and finish. We have ourselves used one for three years past, and it has given the highest satisfaction, and is pronounced by all who have heard it, one of the very best. The different priced instruments are of equally good tone—the price varying with the size and style of finish. The size, prices, etc., of these instruments can be learned particularly by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive catalogue. The instruments sent as Premiums will be sent new directly from the factory at Buffalo, ready boxed, and without expense to the recipient, except for freight. Schools and churches can readily combine in getting up and secure one of these instruments. This has been frequently done. See "N. B." under Premium No. 10.

Premium No. 9—Melodeon.

104 Subscribers at 81 each, (or 182 at 80 cents each) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$60 Melodeons** (4½ octaves.) See No. 8

Premium No. 10—Melodeon.

90 Subscribers at 81 each, (or 130 at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$40 Melodeons** (4 octaves.) Remarks above. N. B.—Higher or lower priced Melodeons will be given for larger lists, in the same proportion.

Premium No. 11—New Cyclopedia—A Splendid and Very Valuable Work.

96 Subscribers at 81 each, (or 140 at 80 cents each,) will entitle the person getting up the club to a set of *Appleton's* **New American Cyclopedia,** now in course of publication, consisting of *sixteen large volumes* of about 770 *pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge.* Fourteen volumes are now ready, and the remaining two will be furnished as soon as issued. We recommend it to every one, whether they procure it as a premium or not. The work is sold at $3 per volume, or $48 for the set. To no better purpose could any one devote the Winter evenings than in raising a club of subscribers to secure this for himself and family. Several schools have secured it, through the combined efforts of the scholars in raising clubs of subscribers. Boys have also secured it by their individual efforts.

Premium No. 12—Best Dictionary.

18 Subscribers at 81 each, (or 40 at 80 cts. each,) will entitle the person getting up the club to a copy of the *large Pictorial Unabridged Edition of* **Worcester's Dictionary,** (Price $7 50.) This now stands confessedly the most valuable Standard Dictionary published. It weighs nearly 10 lbs.; is 12 inches long, 10 inches wide, nearly 4 inches thick, and contains 1854 pages of 3 columns each, giving the spelling and pronunciation, with full explanations, of every word in the English Language, and as a source of general information on all subjects, stands next to the Cyclopedia. The Dictionary can be called for at our Office, or be sent by Express or otherwise, to any part of the country.

Premiums Nos. 13 to 18—Back Volumes—A First-rate Library.

These premiums (13 to 18,) will enable any one to secure the previous excellent volumes of the *American Agriculturist*

ist, as far back as Volume XVI. We have stereotype plates and can print any number desired of the English Volnmes, 16, 17, 18, 19, 20, and 21, and of the German Volumes 18, 19, 20, and 21. These will be sent in clean, new numbers, each volume by itself, with index complete, and be forwarded *post-paid*. The whole five can be taken together, or one or more copies of any particular volume be selected, as desired. They will be presented as in the table above, viz: For **20** Subscribers at $1 each, (or **36** at 80 cents each,) we will present **six volumes.** For **16** Subscribers at $1 each, (or **30** at 80 cents each,) we will present **five volumes.**——For **13** Subscribers at $1 each, (or **26** at 80 cents each,) **four volumes.**——For **10** Subscribers at $1 each, (or **20** at 80 cents each,) **three volumes.**——For **15** Subscribers at 80 cents each, **two volumes.**——For **10** Subscribers at 80 cents each, **one volume.**——Let every oue selecting these premiums be careful to name just *which* back volumes are desired.

Premium No. 19—Best File for Agriculturist.

Jacobs' Portfolio File, made just to fit the *Agriculturist*—the name gilded on. This is a leather cover or portfolio, so arranged that successive numbers of the paper can be inserted in a minute, and be properly preserved in book form for reading. When one volume is completed, the sheets can be removed and stitched, and a new volume inserted. A single cover will answer for a dozen successive volumes. It is the most complete file yet made. The price is $1, and the postage 23 cents. We will forward it, post-paid, to any one sending *eleven* subscribers, at the lowest club price, (80 cents each.)

Premium No. 20—Paints.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Windsor & Newton's* **Water Color Paints**—consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These Paints are imported from London, and are by all considered the best in the world. They are adapted to the finest work, or they will make a neat and appropriate present to any of our younger readers. They will be sent post-paid any where in the United States within 3000 miles.

Premium No. 21—Paints.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an Assortment of *Osborne & Hodgkinson's* **Water Color Paints,** consisting of 24 colors or shades, put up in a neat case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, will answer for ordinary practice by children or beginners, and for common sketching. Sent same as No. 20.

Premiums Nos. 22 to 26.

We have not space left to describe these particularly, this month. The Cylinder Plow was described in this journal last year. It is undoubtedly a great improvement. The Eagle Plow is well known, and so is the Hay and Straw Cutter, and the Steel-toothed Cultivator, one of the most useful implements on the farm. The Lard and Wine Press is a very convenient household implement, for pressing out lard or tallow, the juice of grapes, currants, berries, &c. For the prices, and subscribers required, see the table above.

Market Review, Prices, etc.

American Agriculturist Office, New-York, Saturday, Oct. 18, 1862.

The movements in Breadstuffs continue on a very heavy scale, surpassing in magnitude even those of the corresponding periods of last year; and at present no well-informed dealer anticipates any serious falling off in the proportionate volume of business. The extraordinary rise in the price of gold and the corresponding advance in Sterling Exchange have served materially to encourage the export trade; and the Custom House returns snow a very satisfactory result in this most important branch of the commerce of the port. Our table of prices below indicates a *large advance* in the market value of all kinds of Breadstuffs. This is of course largely due to the rapid increase in the value of gold, as compared with the paper currency, used in the purchase of produce in this market, as well *as throughout the country*. An illustration may be interesting: When a gold dollar is selling for $1.35 of the currency in use, as it was on the 15th inst, the currency dollar is really worth only a fraction over 74 cts. in gold. A barrel of flour, selling for $7 in currency, therefore brings only $5.18 in gold. On the 18th of September (when our last report was made up) a gold dollar was worth $1.17 in currency, making the value of the currency dollar (accepting gold as the standard) about 85½ cts. The currency dollar has since depreciated 11½ cts., or gold has advanced in that proportion. The highest shipping grade of extra State flour sold on the 18th of September for $5.70, and to-day for $7, showing a nominal rise of $1.30 per bbl. Allowing, however, for the advance in gold, there is still an actual specie rise in the price of extra State flour of about 50 cts. per bbl., which is a decidedly encouraging improvement. This illustration applies to the whole list of articles of Produce....In every branch of the Produce trade, the activity has been quite unusual. The home and export demand has been brisk, especially for Breadstuffs and Provisions, and speculation has also set in, partly encouraged by the abundance of currency. As we close the present review gold is reported as declining in price, and paper currency is rising in value, which explains the cause of the temporary heaviness in the markets, to-day. Another adverse influence is that which results from the ravages on our Atlantic commerce, by the rebel Steamer "290," now known as the Alabama. Shippers are reluctant to send forward their property, until they can feel assured of its safe transportation to European markets. Foreign vessels can carry freight securely, but the number of these in port is not equal to the requirements of the export trade, and the high rates which their owners are asking operate as a hindrance to free shipments. It is to be sincerely hoped that our Navy will soon dispose of this piratical craft and any others which *professedly* neutral England may permit to be fitted out from her ports.

The following tables, made up from a great number of figures, present in brief space, and in convenient form for reference and comparison, the most comprehensive view of the transactions in the breadstuff markets to be found in any journal. They are prepared specially for the *American Agriculturist* by a careful reporter of long experience, who devotes his entire time to the special business of watching the markets.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

Receipts.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 days *this* m'th	438,000	5,079,000	3,198,000	95,000	132,500	747,000
26 days *last* m'th	481,000	3,270,000	2,510,000	132,000	53,000	437,000

Sales.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
25 days *this* month,	541,000	6,514,000	3,687,000	101,100	94,500
26 days *last* month	513,000	5,482,000	3,065,000	104,500	——

2. *Comparison with same time last year.*

Receipts.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
25 days 1862......	438,000	5,079,000	3,198,000	95,000	132,500	747,000
25 days 1861......	539,000	3,617,000	3,812,000	74,100	158,800	427,000

Sales.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
25 days 1862......	541,000	6,514,000	3,687,000	101,100	94,500
25 days 1861......	616,000	6,289,000	4,708,000	115,950	136,000

3. *Exports from New-York, from Jan. 1 to Oct. 15.*

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862....	2,436,328	19,097,373	9,228,402	1,060,018	22,183	133,631
1861....	2,121,403	18,642,887	9,280,595	501,795	1,000	147,734
1860....	1,340,981	8,109,018	2,170,894	450	8,280	102,508

4. *Receipts of Breadstuffs at Chicago, Jan. 1, to Oct. 13.*

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862....	1,284,939	10,216,967	33,724,642	806,194	583,314	2,870,996
1861...	1,126,098	13,297,350	22,823,077	330,283	406,028	1,170,775

5. *Shipments from Chicago, from Jan. 1, to Oct. 15.*

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862 ...	1,227,048	10,198,483	23,983,266	665,093	167,564	2,438,614
1861....	1,136,637	11,914,915	20,208,067	323,084	144,544	1,573,288

CURRENT WHOLESALE PRICES.

	Sept. 18.	Oct. 18.
FLOUR—Super to Extra State	$5 10 @ 5 70	$6 30 @ 7 00
Superfine Western	5 05 @ 5 25	6 25 @ 6 60
Extra Western	5 45 @ 7 00	6 65 @ 9 00
Fancy to Extra Genesee	5 65 @ 7 00	7 05 @ 9 00
Super. to Extra Southern	5 55 @ 7 25	6 75 @ 9 50
RYE FLOUR—Fine and Super.	3 10 @ 4 40	3 25 @ 4 75
CORN MEAL	3 50 @ 3 75	3 50 @ 4 00
WHEAT—All kinds of White	1 37 @ 1 53	1 45 @ 1 65
All kinds of Red	1 08 @ 1 31	1 21 @ 1 46
CORN—Yellow	62 @ 65	70 @ 72
White	65 @ 75	70 @ 85
Mixed	54 @ 60	61 @ 68
OATS—Western	52 @ 58	56 @ 59
State	55 @ 60	57 @ 60
RYE	75 @ 83	72 @ 84
BARLEY	None selling.	1 15 @ 1 25
BEANS—Medium and Pea, bu.		2 25 @ 2 50
Marrow and Kidney		2 50 @ 2 75
HAY, in bales, per 100 lbs.	60 @ 75	55 @ 70
COTTON—Middlings, per lb.	56 @ 57	61 @ 61½
RICE, per 100 lbs.	6 50 @ 8 75	6 50 @ 9 00
HOPS, crop of 1862, per lb.	14 @ 18	19 @ 24
FEATHERS, Live Geese, p. lb.	42 @	45 @
SEED—Clover, per lb.	Nominal.	Nominal.
Timothy, per bushel	Nominal.	Nominal.
SUGAR—Brown, per lb.	8 @ 10¾	8¾ @ 11½
MOLASSES, New-Orleans, p.gl.	35 @ 45	40 @ 50
COFFEE, Rio, per lb	21 @ 22½	25 @ 27
TOBACCO—Kentucky,&c,p.lb.	11 @ 25	14 @ 30
Seed Leaf, per lb.	12 @ 32½	14 @ 35
WOOL—Domestic fleece, p. lb.	55 @ 70	52 @ 68
Domestic, pulled, per lb.	48 @ 65	50 @ 65
TALLOW, per lb	10½ @ 10¾	12 @ 12¼
OIL CAKE, per tun	33 00 @ 40 00	40 00 @ 44 00
PORK—Mess, per bbl.	11 37½ @ 11 50	13 90 @ 14 00
Prime, per bbl.	10 00 @ 10 12½	12 37 @ 12 50
BEEF—Plain mess	13 50 @ 14 00	12 25 @ 13 50
LARD, in bbls., per lb	9 @ 9⅞	10 @ 11¼
BUTTER—Western, per lb.	12 @ 16	16 @ 20
State, per lb.	15 @ 20	19 @ 24
CHEESE	7 @ 9½	8½ @ 11
Broom Corn—per lb.	5 @ 7	5 @ 7
EGGS—Fresh, per dozen	15 @ 16	17 @ 17½
Western, per doz.	14 @ 15	16 @ 17
POULTRY—Fowls, per lb.	10 @ 12	10 @ 12
Ducks, per pair	75 @ 1 25	75 @ 1 25
Geese, per pair	1 12 @ 1 37	1 00 @ 1 50
Turkeys, per lb.	12 @ 14	12 @ 14
PARTRIDGES, per pair		75 @ 87
WILD PIGEONS, per dozen		1 63 @ 1 87
POTATOES—Dykemans, p. bbl	1 25 @ 1 50	1 00 @ 1 25
Buckeyes, per bbl	1 25 @ 1 50	1 25 @ 1 50
Peach Blow, per bbl	1 75 @ 1 88	1 50 @ 1 75
Mercers, per bbl.	1 75 @ 2 00	1 50 @ 1 75
Sweet Delawares, per bbl.	3 00 @ 3 50	2 50 @ 2 75
Sweet Jerseys, per bbl		2 00 @ 2 25
ONIONS, Red & Yellow p. bbl.	1 25 @ 1 38	1 25 @ 1 50
TURNIPS—Rutabagas, p. bbl.	75 @	62 @ 75
Marrow Squashes, per bbl.	75 @ 87	1 00 @ 1 25
PUMPKINS—Cheese, per 100.		3 00 @ 6 00
CABBAGES, per 100.		3 00 @ 4 00
APPLES, Western, per bbl.	1 50 @ 1 75	1 50 @ 1 75
Apples, River, per bbl.		50 @ 1 00
PEARS, cooking, per bbl	75 @ 1 00	1 25 @ 1 75
Pears, fancy, per bbl	3 00 @ 3 50	5 00 @ 9 00
QUINCES, per 100.		50 @ 1 00
CRANBERRIES, per bbl.		6 00 @ 7 00
GRAPES—Isabellas, per lb.		3 @ 6
DRIED APPLES		5 @ 6

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been well supplied for a month past, the receipts averaging 5,154 head per week. (For two months the weekly average has been 5,252, a larger number than were ever previously received in the same length of time.) There was no change in prices the first two weeks, and the slight advance of the week following was met by a similar decline at the last market, so that prices are the same as at our last report. The cattle were about all sold each week. Until this week much of the stock was poor, but at the last general sales, Oct. 14th, with a good run of well fed cattle in the yards, the prices were equivalent to 8½c. to 9c. per lb. for the estimated dressed weight, for first quality; 8c. for fair beeves, and 5½c.@7c. for very poor to medium animals, the average of all kinds being 7½c.

Veal Calves.—Receipts are on the increase, and prices are advancing, with a brisk demand for good fat veals which readily command 6c. per lb. live weight. Common calves 5c.@5½c.

Sheep and Lambs.—The sheep trade has been remarkably good during the past month, affected considerably by the advance in wool which caused a corresponding rise in pelts. Skins are now worth $1.37 to $1.40 in lots. A good drove of 100 lb. sheep will bring 5c. per lb. live weight, and a little more if extra fat. Ordinary sheep are worth 4¼c.@4½c., and lambs are selling at 5c.@6c. Sold in mixed lots of sheep and lambs, they bring about $4 per head. Some fat lambs have been sold at $5¼ each. Receipts have averaged 13,174 per week.

Live Hogs.—The Autumn season, with cool weather for packing, always brings an abundance of hogs. The average receipts for the past month have been 24,000 per week. Prices have remained nearly stationary, with a good demand at 4⅛c.@4½c. per lb. live weight, for prime heavy corn-fed hogs, yielding good hams and lard. Poor, thin hogs abound, and go off slowly at 3c.@3½c.

The Weather has been mild for Autumn, with scarcely a touch of frost in this vicinity. Everything has been very favorable for maturing and harvesting late crops.——OUR DAILY NOTES, condensed, read: *September* 20, clear, warm A. M. cloudy P. M.—21, cloudy A. M. clear P. M.—22, 23, clear, fine, mild—24, cool and cloudy—25, 26, 27, clear, fine—28, cloudy—29, clear—30, cloudy, ground dry, having had very *little* rain for three weeks.—*October* 1, 2, 3, Northeast rain storm, clearing off warm on afternoon of 3d—4, clear, warm, with rain at night—5, 6, clear, cool—7, 8, 9—fine, warm days—10, N. E. rain storm—11, rain A. M., cooler P. M., with light showers—12, cloudy, rain at night—13, continued rain—14, cloudy A. M., clear and warm P. M.—15, clear and moderately cool—16, cloudy A. M., light rain P. M., with heavy shower at night—17, 18, clear fine, bright days.

The Rain Fall from Sept. 15th to Oct. 15th, amounts to 3.34 inches, which is light for this season of the year. The Barometer has ranged from 29.75 inches to 30.20 inches—a light variation.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.)—*r* indicates rain—*s*, snow.]

SEPTEMBER.

1......70*r*	7......64	13......62	19......64	25......51
2......58	8......66	14......56	20......64	26......51
3......48	9......68	15......59	21......61	27......52
4......54	10......61	16......62	22......57	28......62
5......59	11......65	17......62*r*	23......56	29......62
6......60	12......69*r*	18......65	24......60	30......63*r*

Average..................................61°

OCTOBER.

1......60*r*	4......66	7......60	10......64*r*	13......48*r*
2......59*r*	5......59	8......66	11......58*r*	14......50
3......62*r*	6......48	9......65	12......48	15......52

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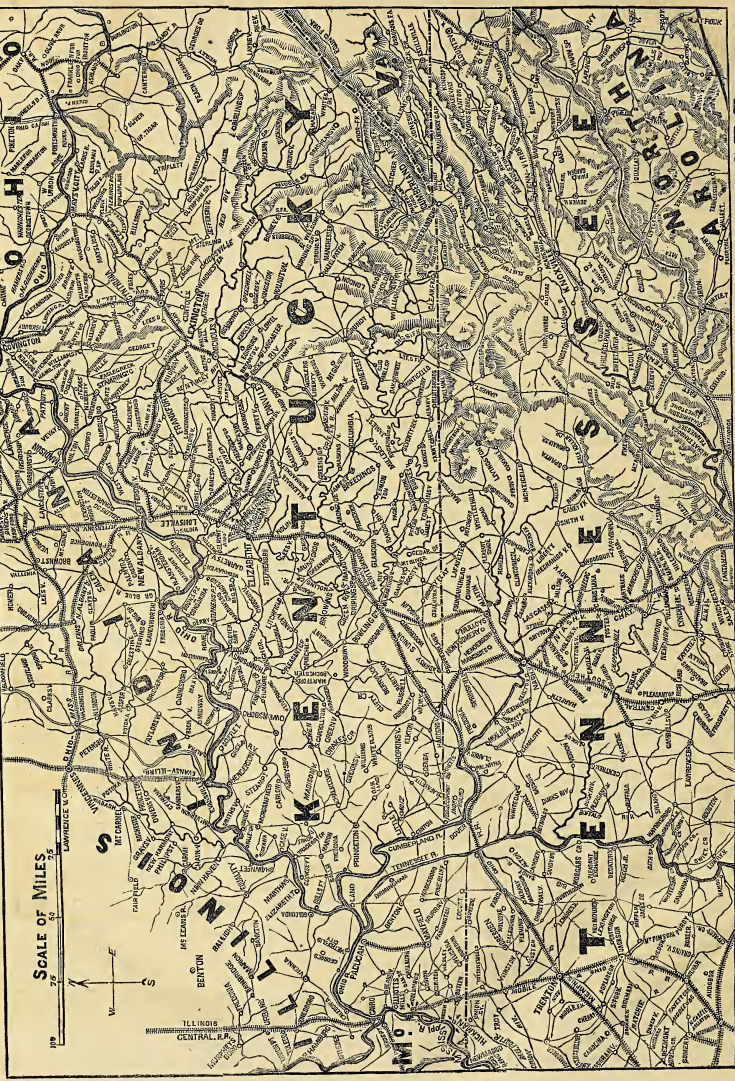

MAP OF KENTUCKY AND PART OF TENNESSEE.

The above Map (engraved expressly for the American Agriculturist) shows the field of the operations of the armies in Kentucky and Tennessee.

Death of a Prominent Pomologist.

The country will be pained to learn of the decease of that well-known horticulturist and nurseryman, Wm. Reid, of Elizabeth, N. J., on the 8th of October, of an affection of the heart. His death was announced at the Fruit Growers' Meeting at the office of the *American Agriculturist*, Oct. 9th. where many gentlemen present testified to his worth as an individual, as a public man, and especially to his eminent position as one of the best pomologists, and horticulturists of the age. A vote of condolence and sympathy with the family was passed and transmitted to the family by the Secretary.

Pumpkins, Squashes, and Ornamental Gourds.

There will be a **Public Exhibition** of PUMPKINS, SQUASHES, AND ORNAMENTAL GOURDS, at the office of the *American Agriculturist*, 41 Park Row, New York City, opening on Wednesday, **Nov. 5th, 1862,** at which the following prizes will be paid by the Publisher, upon the official award of competent Committees.

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No. 1—For the *Heaviest* Pumpkin or Squash		$20.00
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No. 3—For the 3d	do.	5.00
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No. 5—For the 2nd Best	do. do. do.	5.00
No. 6—For the largest yield on a single Vine...*		10.00
No. 7—For the 2nd	do. do. *	5.00
No. 8—For the largest and finest collection of Fancy or Ornamental Gourds*...		10.00
No. 9—For the 2nd	do do. *....	5.00

* All to be grown by one person and to be accompanied by an affirmed statement from the grower, and two disinterested persons who assist in gathering the specimens.

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Note 2.—All Exhibitors must notify us of their intentions by Oct. 10th, and deliver specimens for competition on or before Nov. 3d. Specimens to be delivered free of charge.

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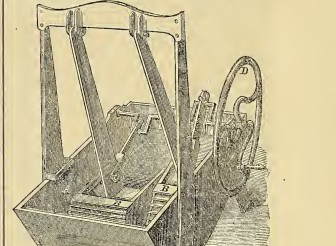

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The offer of 14 months for the price of 12, extended only to October 31st. But we print 3,300 extra copies of this November number, of which 300 will be reserved for new subscribers from the Pacific Coast, Utah, and other distant points, and the rest will be presented to the first 3,000 new subscribers now received for volume 23, (1863). All new names for a year, now coming in, are at once entered from the date of reception until the close of 1863. Thus then, all new subscribers sent in this month, get 13 months at the price of a year, and the first 3,000 will receive 14 months. This applies to *all new* subscribers, whether coming singly, or in premium clubs, or for maps, or as awards from Agricultural Societies, or otherwise.

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Our arrangement for *Premium Maps* was but temporary, and they could not be promised far ahead. We are happy to state, that they can be continued during November. Here is the offer: For one new subscriber at $1 a year, sent now or during November, we will present, when desired, a large colored map of *Virginia*, including Maryland and part of Pennsylvania. This covers more than *ten square feet*, and gives all the rivers, small streams, mountains, cities, villages, and principal roads in the whole state of Virginia, so completely that the location and every movement of the armies can be followed.

Or,

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A farmer in Central New-York, writes to the *American Agriculturist:* "I paid my taxes last year by investing a single dollar in this wise. After long solicitation by a neighbor, I subscribed for your journal, as it happened, just before you published the article advising us that grain would be higher. I was on the point of selling, but after reading your remarks decided to wait, and thereby gained over seventy dollars on my crop—enough to pay my taxes for two years." This is one instance of many that have come to our knowledge, where a single suggestion in this journal has returned many fold the price of subscription. Help your neighbor pay his taxes next year by inducing him to read and profit by the valuable information continually published in these columns. He will thank you.

In Good Company.

The constant readers of the *Agriculturist* number far more than one hundred thousand, largely made up of the most intelligent, enterprising members of the agricultural community. It is worth something to be introduced to such a society, and share the benefits of their thoughts and suggestions. These are freely presented in this journal, and it would be strange, indeed, if among the whole amount of information afforded, there could not be gleaned a single dollar's worth of useful material for thought and practice. A large number of the subscribers have assured us that they would not part with the knowledge thus gained for many dollars. Please invite your friends and your neighbors to join this good company.

To-day as well as To-morrow.

Those who feel disposed to try for one of our premiums (see page 346) can do it to-day as well as next week, and even better, for subscribers sent in now get not only all of volume 22, (1863) but the rest of this year thrown in.

A Thinking Machine,

Would be worth more to the community than any invention yet brought out. A good journal is the nearest approach to it. It presents thoughts to men, which would never have entered their heads but for its aid, and thus it answers the purpose of a thinking machine. Consider a moment, that hundreds of contributors in every part of the country send their best practical thoughts on farm, garden, and household matters, to the *American Agriculturist*, which works them up, and presents the whole to subscribers for a single dollar a year—and for less to Clubs. Can money be better invested? Please ask your neighbor what he thinks, and will *do* about it.

"Two of a Trade Can Agree,"

Notwithstanding the old adage that they *can't*. Here is a proof in point: Over *Six Hundred* cotemporary Journals have this year stated editorially that the *American Agriculturist* is the best journal in the country for the Farm, Garden, and Household. Most of these journals are on file and can be shown.—"What everybody says must be true." We can not tell how many subscribers think or say the same things, and speak from personal experience. The Publisher will, of course, be pleased to have a hundred thousand more read the paper so as to be able to speak from a fortunate experience. Will the reader please ask his neighbor to make up one of the hundred thousand? There are many, etc., offered to those who obtain subscribers, and extra copies to the new comers.

Good all Around.

Is there a widow or a soldier's wife in any neighborhood, to whom her neighbors would like to give a "benefit?" What better than a labor-saving Sewing Machine? Here is a plan to get one easily. Let *ten* of her neighbors (the ladies of course) unite their efforts for a day, and each solicit 9 subscribers for the *Agriculturist* at $1 a year; or 13 subscribers at the lowest club price of 80 cents each. This will secure a first-rate Wheeler & Wilson machine (see premium list p. 346). By going to different parts of the town a club can be readily raised. Almost every one will put down a dollar for such an object, especially when he will at the same time secure the *Agriculturist* for a whole year, or 14 months if it be done soon. The enterprise will pay all around. At least one will be greatly benefited, and 90 to 130 copies of the paper in a neighborhood or town will tend to rural improvements, to say nothing of increased products upon the farms and gardens, and in-door improvements as well.

How to Buy Cheap.

On page 346 are named a lot of really good articles, one or more of which is wanted by almost everybody. We *give* these articles in return for lists of subscribers—a cheap way to *buy* them. The list gatherer loses no money if he does not gain the largest premium aimed for. Between three and four *thousand* persons have secured one or more of these premiums during the past two years. "What man (or woman or child) has done, man (or woman or child) can do." Who will have a Premium?

Did You Read,

On page 309, what a Michigan farmer said? How a single hint in his *Agriculturist*, about sowing his wheat crop, gave him $300 *clean profit!* Such hints are scattered all along through every number. A man should read without thinking, and the more thinking he does, the better will the work of his hands pay. Please mention the matter to those neighbors who have not yet learned that it *pays* to read and think earnestly about their own business.

Our General.

The *American Agriculturist*, though not a military journal, has yet supplied one general for the field whose services can not be over estimated, namely: "GENERAL INFORMATION"—in all that pertains to operations on the farm, garden, and household. From the *Agriculturist* arsenal there are annually sent forth to the army in the *field*, over 2,000 loads of "fixed ammunition" in the form of useful items, all prepared with especial reference to the wants of the army combating with ignorance, poor crops, poor housekeeping, etc., etc. These articles are *not* mere rehashes of selections from irresponsible sources, but are prepared by our own editors and contributors. Is there not work for our *General* in your neighborhood? Please aid in introducing him into every "strong-hold."

☞ For Terms, etc., See Page 349.

AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

ORANGE JUDD, A.M., EDITOR AND PROPRIETOR. Office, 41 Park Row, (Times Buildings.)

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☞ Other Journals are invited to copy desirable articles freely, if each article be credited to *American Agriculturist.*

☞ See pages 358, 375 and 378, this month.

December.

"All nature feels the renovating force
Of Winter; only to the thoughtless eye
Is ruin seen. The frost-concocted glebe
Draws in abundant vegetable soil,
And gathers vigor for the coming year.
A stronger glow sits on the lively cheek
Of ruddy fire, and luculent along
The purer rivers flow, their sullen deeps
Transparent, open to the shepherd's gaze,
And murmur hoarser, at the fixing frost."

Rude Winter is upon us, with all his frosts and storms. A complete change has come over the aspects of the earth and sky, and a change almost as great over our feelings. The earth has changed her drapery of green for one of russet brown or of snowy whiteness. The sky has lost its golden hues, and the sun, even when it tries to shine, has a feeble smile. The gorgeous colors of the forests lasted but for a day, and now the Winter winds whistle through the desolate branches. The running streams are bridged with ice, and the merry skater on wings of steel rushes along where floating keel plowed its way.

This complete change of the aspects of nature and of the occupations of man, is one of the charms of country life, and one of the advantages which the farmer has over the dwellers in town. The citizen is very much tied up to the same routine in business or in pleasure the year round. He threads the same streets, jogs on over the same horse railroad or in the same omnibus, mounts to the same chair at his office desk, reads by the same gas light the year round. If he packs up his valise, and his wife and daughters get their big trunks ready for a trip to the country, when the dog star is in the ascendant, he does not necessarily have a change or experience any new sensations. The big trunks export no inconsiderable part of the city to Saratoga or Newport, and he finds about the same people and the same pleasures in his Summer jaunt, as in his abode in the city for the rest of the year. If he eats boiled salmon and drinks champagne at the watering place, did he not do the same at home? If he ventures on a glass of Congress water at the Springs, when his stomach is a little out of order, did he not drink the same in Winter whenever the doctor ordered it? If he ventures on bathing, did he not have the same at home, with plenty of soap and crash towels? If the young ladies dance and flirt in the Summer vacation, did they do anything else in the Winter? If the good mother has a reasonable solicitude about marriage prospects amid the gayeties of the grand ball that winds up the season, does she not have a similar palpitation when the season opens for the Winter in the city?

But the dwellers upon the farm are forced by their occupation, and by their circumstances, to a great variety of employment. Every season and almost every month brings new scenes, suggests new thoughts, and affords new enjoyments. If he travel over the same beaten track to mill and to meeting, the scenes along the way are constantly changing. Every month brings its variety of flowers, and its new shade of green upon the meadow, and upon the forest, until the grass becomes russet and the foliage blushes with every shade of crimson, and dies in a blaze of glory. Even the leafless forest has its charms, and the spray of many of our forest trees, as we look up at them against the grey Winter sky, is hardly less beautiful than in Summer. We now have a chance to see beauties in the frame work of the tree, in the arrangement of the branches, and the smallest twigs that the drapery of Summer conceals from us.

Even this season has its attractions for the eye, and for the ear, as well as for the heart. The flowers have gone and every green thing has withered, but the cunning handiwork of the Great Architect is everywhere manifest. We see it in the delicate frost work on every fence and building, and along the banks of every stream. What can be more charming than the fresh fallen snow on a bright Winter morning, as it lies sparkling in the sun, or hangs upon the loaded bushes by the roadside—mimic leaves and fruits, the creations of the night. Then Summer with all its glories has no more brilliant sight than the forest or orchard after a freezing rain, every limb sheeted with ice and every twig pendant with its burden of jewels. The ice that spans the lake and river, is hardly less beautiful than the unfrozen water. We see a new world as we look down into the transparent depths beneath—fishes at rest in their Winter quarters, and shells and aquatic plants.

The songs have indeed gone from the forest, and we only hear now occasionally the solitary call of the bluejay, the cawing of the crow, or the sharp rattle of the woodpecker foraging for worms along the dead branches. But still, there is music even in Winter. Every one accustomed to observe the phases of nature, has noticed the different sounds of the breeze sweeping through leafless trees and through the Summer forest. Almost every kind of tree has a note peculiar to itself, both in full foliage and when its branches are bare. The evergreens alone give forth the same soothing murmur in Summer and Winter. These are the connecting link between the dead past and the bright future, showing that God has not forgotten the earth amid the wreck and ruin of Winter. Who has not noticed the sonorous ring of the loaded cart or sled, as it is driven over the crisp snow path? Then we have the song of the woodman and the echoes of his ax, and the crash and thunder of the trees as they are laid low. Once, too, one of the pleasant sounds of this season was the thud of the threshers as they wielded the flail upon the barn floor. But the improved threshing machines have nearly ended that—saving days and weeks of time to be devoted to other pursuits profitable to the purse or the mind.

Winter brings a very pleasant change of occupation to the farmer. He is relieved from the pressure of seed time and harvest, and has time to enjoy his possessions. There is even more pleasure in distributing his hard earned harvests than in gathering them. He takes pleasure in ministering to the pleasure of his animals, and he has time now to contemplate the grace of well bred horses, the bulk of corn fed Durhams, and the elastic step of his Devon team. He lingers at the stable, plying the currycomb; at the sty, patting the sleek sides of his Suffolks; at the sheep yard, calling his South Downs, as they poke their dusky noses into his basket for the sliced roots and grain. Bridget does not get a chance to feed the poultry now. The master scatters the grain himself with liberal hand, and rejoices in the long train of turkeys, the flocks of geese and ducks, and the multitudinous hens that come flying at his call. Now they put on their most beautiful plumage, snowy whiteness, glossy green and bronze, jet black, and golden yellow—beautiful as they grow, and not less so when they adorn the heads of our village belles. There is comfort in seeing the precious grain disappear, in marking the thrift and happiness of his fowls, and the outworking of their social life. He remembers the proverb, "There is that scattereth and yet increaseth; and there is that withholdeth more than is meet, but it tendeth to poverty." He enjoys the more leisurely pursuit of business, and has time for mental and social culture, for reading, for farmers' clubs, and for the literature of moral life. Amid scenes like these he has no occasion to envy Bullion's bloated prosperity. With a cheerful and a thankful heart, he now welcomes the storms of Winter, and the CLOSE OF THE YEAR.

Calendar of Operations for Dec., 1862.

SUNDRY HINTS FOR THE SEASON.

The Farm, Household, etc.

Vegetation is now taking its long nap, beneath the spotless, fleecy blanket which with motherly care good Dame Nature spreads over her offspring. During all the past season, while we have labored, and while we have reaped and slept, the grasses and grains, the trees and fruits, the vegetables and the flowers, have pushed steadily forward; now they enjoy continuous repose. Not so with us. Our hands may be less active, but the mind will be more so. We are shut up from tilling the fields; the time is auspicious for *cultivating the mind.*"

But there is still out-door work to give active exercise enough to the muscles to keep the physical system in order. In addition to the daily round of labor in caring for the live stock, there are tools and implements to make or repair, the summer's fuel to provide, fencing materials to get ready, marketing of farm produce, hogs to fatten and slaughter, ice to gather, schools and school-houses to be visited: and that most profitable of all farm operations in the older states, increasing the heap of good compost manure. Now is also the time to attend well to the

Accounts—Farmers do quite as large a proportion of their business on the credit system as any other class of men. Very few know from week to week just how their store accounts stand. They leave the affairs there to the merchant. A multitude of transactions with their neighbors are on credit, with no record but the memory, and how many lawsuits grow out of the differences in memories. The farmers of this country will not close up all their transactions of this past year without spending in the aggregate several millions of dollars in fees to justices, pettifoggers, constables, jurymen, witnesses, etc., most of which would be saved if a regular system of account-keeping everywhere prevailed. A regularly kept daily account book, the simpler the better, is one of the best witnesses a man can bring into court, if so unfortunate as to need to go there.——The farmer also deals on credit with his fields, his stock, etc. He should keep such an account with each that the profit and loss can be known. This month, get all accounts adjusted, if not settled.

Buildings—The barns should be looked to. A nail hole in the roof, or a clapboard off, may let in snow or rain enough to spoil a dollar's worth of grain or fodder—perhaps ten or twenty dollars' worth. A lightning rod may save the results of a season's labor. Air-hole in the stalls may require several extra dollars' worth of feed to keep up the temperature in the body of the stabled animals. A shed, and side protection against winds will save many pounds of flesh, or of food to produce it, on each animal that can not be stabled this Winter. An extra pound of hay, at least, will be needed to dry off the rains or melted snow from the fleece of an unsheltered sheep.—Tightening the window sashes, and nailing down the loose clapboards will save many times the labor, in lessening the fuel required in-doors. A bank of earth, or better of tan-bark, against the outside of the walls may save the vegetable stores in the cellar; bad air, or too much warmth within may destroy them. A coat of paint on the clapboards, or on the fences, may preserve them many years longer.

Cattle—Two good, well-conditioned animals are worth more in Spring, than three or four which have barely survived the winter. If the shelter and forage are just sufficient for five animals during winter, better sell the sixth one for a song, or make "crow meat" of it at once. Divide the supply for five among six and they will all come out weak. Six cattle well sheltered, regularly fed, watered and salted, and frequently curried, will eat less than five left to rough it through the cold and storms of winter, and the former will all be far more valuable in Spring. Cattle are as likely to die, or be sick and pining with "colds and consumptions," as the human animal. A well kept cow bears a calf worth twice as much as an ill kept one. Well kept oxen are ready to begin the spring work effectively, and do twice as much as those barely getting through winter. To sum up, taking good care of cattle pays well every way. It does not pay to invite crows to a carnival on the flesh of dead animals.

Club Meetings for Social and Mental Improvement should be held in every neighborhood. They need not and should not be formal and embarrassing, but evening visits, where conversation is unrestrained. They thus contribute to social enjoyment as well as practical improvement. For young farmers, a debating club in which the questions for discussion are of practical agricultural and horticultural interest, tends to develop skill in the use of language, argumentative power, and capacity for public life, besides eliciting useful knowledge.

Fencing Materials—Cut timber when other work is not pressing. Some strip off the bark at once to secure rapid seasoning. This prevents the timber from being worm-eaten, and, perhaps, also from rotting, especially between the bark and wood, where decay soonest begins.

Fodder—The scarcity and high price of hay in many parts of the country, owing to the dry weather, makes it doubly important to be economical in its use. We have kept horses and cattle in very good condition when their principal food was corn-stalks, cut very short and wet up with a little bran for the cows, and a mixture of bran, shorts, ground oats, and corn for the horses. Racks or other contrivances are essential to keep animals from wasting hay. It pays to cut up all hay and straw and wet it before feeding.

Hogs fatten much more rapidly on the same food in warm weather, or if provided with a warm, clean pen or a sleeping place in the straw-yard. Pure water, in abundance, is essential unless fed on moist food. It is generally agreed now, that cooking or steaming food for hogs pays a good return for the cost and trouble. See Prize Article on hogs, page 235 in August *Agriculturist.*.

Horses, perhaps more than other animals, enjoy and thrive upon what suits the human animal, such as light, well-ventilated, neat apartments, free both from cold drafts of air, and from filth and foul vapors. They "catch cold" easily, and being driven at a higher speed than any other animal, are more apt to be affected by cold when tired or left to stand, after a perspiring chase, without being well blanketed. A curry comb and brush are as useful to a horse as washing and bathing to a man.

Ice—See p. 297, Oct. *Agriculturist.* As there shown, it costs little to keep ice all the year. Rough boards nailed on the outside and inside of posts, with saw-dust between, good drainage below, and roofing and ventilation above, will preserve it as well or straw upon the ice, as the essential things. The longer keeping of meats and other food, including bread, cakes, pies, cooked vegetables, milk, etc., generally pays for the cost of ice. The first clean, thick ice, is usually the best. In cold localities, a mass of ice in the form of great blocks may be secured by letting water spurt out from the house in a spray from jets in a pipe or vessel.

Manure—See important hints in last month's Calendar. Ten or fifteen loads of manure on an acre, with no additional outlay for preparing the ground, for seed, or for labor, will often increase the crop by as many as 30 to 40 bushels of corn, 15 to 100 bushels of potatoes, 1 to 15 bushels of wheat, besides leaving the soil in much better condition for the next crop. Every hand ful of manure in a corn hill will add one or two plump ears, of better quality, and more stalks for fodder. It always *pays* to save and apply every atom of manure possible, except in some of the new fertile regions. The man who saves the largest heap of good manure, protecting it from all washings, will be the one who will get the largest and most profitable crops next year, be the weather good or bad.

Muck—Hunt muck, dig muck, haul muck, and use muck, abundantly. It is a far cheaper source of fertility than anything that can be bought. Put muck in the stables, in the sties, and in the cattle yards, to suck up all the liquids. Use all practicable in this way, and pile up more of it, sprinkling and mixing it well with lime or unleached ashes. *Every plant that grows furnishes, in its decay, nutriment for every other plant.* The rich black prairies are simply muck beds, the product of previous vegetable growth. Every farm has some muck; the black soil in the lower grounds are vegetable matters produced there, or washed down there. Save and use all such depositles, the more the better. It *pays* to do so.

Milch Cows—"*Ex nihilo, nihil fit,*" (out of nothing, nothing is made), was the infidel adage of the ancients; it is true, however, so far as all human operations are concerned, and no one can expect the cows to make milk out of nothing. The more good fodder, the more good milk. A cow well sheltered and regularly fed and watered, in short, made comfortable, will yield much more milk from the same food, than one kept uneasy by cold or by irregularity in her food. Succulent food, potatoes and other roots, cabbages, apples, etc., show marked effects in the milk pail. Pumpkins are also very good, but it is advisable to remove the seeds which promote flow of urine, to the loss of milk and flesh. Moistened or scalded bran and shorts are also excellent sources of milk. A bushel of bran per week will usually increase the milk by 2 or 3 quarts per day, which is worth much more in Winter than the cost of the material. We have tried and proved it often; so have many others.

Poultry—As with the cows, so with the poultry, "*ex nihilo, nihil fit.*" The hens will try to continue their species, by laying eggs, when confined to a grain diet; but as a rule, the more animal food, the more eggs. If they can get no animal food otherwise, they will even peck out and eat each others feathers or quills. Their natural food embraces insects and vermin, and when allowed to roam at large to find these, they lay well. To get eggs in Winter give them all the odd bits of fresh meat, lime, etc. Butchers' offal is a cheap source of animal food for hens. We use scraps from the fat trying establishments, buying it in cakes of from 50 to 100 lbs., and throwing them into the yards where they lie until gradually pecked to pieces and consumed. This material costs from ½ cent to 1 cent a pound—usually 1 cent, and it is the cheapest meat we can get for poultry. Grain is good for fattening fowls. Water always accessible, or regularly supplied, is as necessary for fowls as for other animals. They eat the kitchen offal as readily as pigs, and turn it to more profitable account. Avoid giving them salt food. Comfort—that is, shelter from storm and wind, with good feeding—is the best "hen-preserver" we know of. Whitewash on every inch of the poultry house, will keep out lice. A bed of unleached ashes to roll in, is a good protection against the small vermin. Lime in some form, as oyster shells, bones finely powdered, is needed by laying hens; gravel, or course sand, is needed by all fowls.

Schools—See important hints in last Calendar. The man or woman who drops into the school house often, and shows an interest in the pupils and in their comfort, is a public benefactor. Both teachers and scholars are encouraged to good behavior and to extra efforts. Who does not remember the stimulus to the whole school, of a visit from a parent or other person? A school visited two or three times a week, the visitors insisting that no show or change of programme be made, but that all things go on in regular course, will generally be twice as prosperous as the school not visited. No one should leave it to others to attend to this matter. The public school should be the pet and pride of every good citizen of the district. Visit it often as a recognised friend, not a morose critic. If the good deeds be sought out and appreciated, an occasional hint for improvement, in a kind tone, will be kindly received and acted upon by both teachers and scholars. Speaking evil or disrespectfully of the teacher in the hearing of your children, or to those who will repeat the words in their presence, inflicts a lasting injury upon them. Get the best teacher possible, and uphold him, or her, so long as employed, *for the children's sake.* We have known a school deprived of all efficiency, by a thoughtless word about the teacher dropped by a parent in presence of his child, and repeated by the child to other scholars.—A dollar or two extra from each parent is sometimes needed to stimulate a good teacher, is repaid a thousand fold in the present and future. Just as the twig is bent the tree's inclined.——One hint more. Thirty to fifty children in a close, unventilated room 15x20 feet, breathing over and over the foul air, is next to the "black hole of Calcutta." The brain is dull; the feelings of teacher and scholars are morose; and the health of all impaired. Ventilate the room well, but not in currents of air from the window, nor through cracks in the floor to chill the feet, which should always be kept warm. The ceiling or at the top of the walls is the place for ventilators. Let the floors be very tight and warm; the feet of those sitting still are most likely to suffer.

Sheep—See last month's Calendar again. Nothing pays better now, or is likely to, than sheep growing, where bad laws, and worse public opinion and custom, do not harbor and protect miserable sheep-killing curs. The ghosts of 28 lambs murdered sheep, murdered in one day by these pests of farmers, ycleept good neighbors' watch dogs, and scores of other sheep lost in the same way on the pastoral Western farm, always haunt us when we write a word encouraging sheep raising. But, happily, a better state of things is beginning to prevail.——Good feed, reg ular watering, careful protection from rain, snow and biting winds, are repaid with large interest by sheep.—— "Like produces like;" ten or twenty dollars extra now in the purchase or rent of a good buck, will be returned doubled, if not quadrupled, in the better lambs next season. It costs no more to feed and raise a sheep worth six or eight dollars, than one worth two or three dollars for wool or mutton.

Tools—There is a wide difference between working with and without implements. The amolunt of the difference depends upon the perfection of the implements. One man costing $1 a day for board and wages, will cut as much wood with a first-rate ax, as two men costing $2 a day can cut with poor axes. This is six dollars a week. Does it pay to buy a poor ax because it costs 25 cents or 50 cents less? The same reasoning applies to all other implements. Are all the tools well taken care of? Housing and greasing the plow, which may take ten minutes time now, may save half a day next Spring in hunting after, fixing up, getting the rust off, and starting it well to work. That half a day may prevent the putting in of half an acre of corn or other crop. The wood work if exposed to the weather, may give way at a critical time. Take care of the tools this forenoon; something may hinder the work in the afternoon. Coat all iron and steel implements

with a thin film (rubbed on with a cloth) of 3 parts lard, and 1 part resin melted together.

Winter Grain—It is expansion of the water in the soil by freezing, that breaks and tears the roots of plants; keep the soil as dry as possible during Winter, by clearing the drains, opening the dead furrows anew, and seeing that the outlets are free. Better run a one-horse plow through the dead furrows when unfrozen this month, especially in moist land. A little grain will be destroyed, but this seldom comes to much in the dead furrows, while the better draining of the rest of the land will largely increase the product thereon.

Orchard and Nursery.

Fruit and other trees are now at rest, so to speak, and there is not much to be done with them, though here are a few hints worthy of attention: Where the ground is open, and not overwet, trees may still be transplanted. The soil will settle around the roots and they be ready to start into growth with the first approach of warm weather. See remarks last month. All trees set in Autumn are better off if well banked up with earth, even a foot or more. This holds them more firmly against swaying of winds; it protects them from gnawing of mice; it sheds off water and melting snows, and prevents alternate freezing and thawing of the roots. A single hard freezing with gradual thawing seldom injures the roots of trees; the frequent thawing and freezing of wet soil is what breaks and tears the rootlets. Fig trees are best protected by bringing the branches together enough to set a barrel over them, and filling this with earth—putting one barrel on top of another if needed by the light. Tender raspberries, blackberries, and grape vines, when bent down and covered with earth, come out well. Why not protect the hollest apple, peach, plum, pear, and other trees likely to be injured, by banking earth high around them? It will certainly pay to take this little trouble with trees specially valuable, and probably with all kinds, particularly the first year. Stake and tie trees newly set out, if likely to be swayed by winds. Three stakes with a band of straw around the trunk tied to each stake, will hold them firmly, and prevent their being blown out of position, and the breaking of the roots.

The trunks of trees are often blackened and deadened, especially in very cold localities, by freezing at night followed by exposure to the hot rays of the sun, in the day time. This may be prevented by setting up on the southeast side, branches of evergreen trees, as pine or hemlock, where readily accessible. Or the bodies may be encircled in straw, not thick enough to harbor mice. A Michigan farmer in a note to the *American Agriculturist*, recommends binding newspapers around the trunks. Snow, when liable to break or crack the branches, should be jarred off in time to prevent this.

Mice are sometimes very destructive. At the time of this writing, the ground is dry; if Winter closes in without filling up the soil with water, mice will abound and should be carefully guarded against. The very dry Autumn four or five years ago was followed by greater destruction by mice than any previous year within the recollection of the oldest inhabitant. They bred and multiplied all Winter in the dry soil, and made great havoc among the fruit trees. They seldom attack exposed trunks, but make their way under light snow. Banking with earth or tramping the snow hard around the trees keeps them away. No grass or weeds should be left around the trunks as a harbor for vermin. The bark of young trees is most relished by mice, and these trees should be carefully guarded.

Cions may be cut now, or at any time during Winter when not frozen. Keep them in fine, moist, but not wet soil, in a cellar or cisewhere, where they will be cool, but not frozen. See that each bundle of them be rightly marked. Cions should be cut from vigorous trees, and from straight thrifty shoots of new growth. It is said, though we can not vouch for it, that cions taken from the lower branches come into bearing soonest, while those from the top branches make handsomer, thriftier trees.

Preparing for Spring setting of trees may be done now. The soil plowed up deeply now, or before this, will be ameliorated by freezing and thawing, and be better prepared to receive and nourish trees set out early in Spring.

Draining is the most important preparation for fruit trees. A soil made dry and warm by deep draining will, other things being equal, yield twice as much fruit as if not drained. The trees suffer far less in Winter, and will grow and yield much better during the Summer season.

Mulching the ground with a good coat of manure over the roots of trees as far out as they extend, serves more than one good purpose. It not only washes down into and enriches the soil, but it keeps in the frost later in Spring, and thus prevents the too early starting of the sap and buds. This last will be an important matter, if the season open early and hard freezing afterward occur. We speak from experience, from much observation, and from the philosophy of the matter, when we say that trees protected by a few inches of manure around them will in nine cases out of ten, yield the most certain, the most abundant fruit by far. Try the effect upon at least a few trees. If the mulch be thick enough to keep back the fruit buds to an unusually late date, you will be almost sure to get fruit—apples, peaches, pears, plums, cherries, etc.

In the Commercial Nursery, root-grafting, preparing stakes, labels, tallies, planning for the Spring sales, advertising the public what you have in store for them, etc., will furnish abundant occupation. See Hints to Nurserymen on another page of this paper.

Kitchen and Fruit Garden.

Even in this month, there are some things to be looked after. Utility before beauty may be the necessary rule, and so masses of weeds, straw and manure must, perhaps, remain where they are needed to protect plants left in the ground. But when not needed, it adds to one's enjoyment to look out upon a "cleared up" garden plot. It is well therefore, to gather up the stumps of plants, and to rake off the ground clean as if for a new seed bed. The Summer vegetable garden may thus be a Winter lawn.

It always pays, however, to dig or plow the garden soil into high ridges, and let the frost operate deep downward. That noxious subsoil will be rendered wholesome, if Jack Frost be admitted to pulverize it to his liking. The longer parsnips and beets and parsneps, the larger potatoes, the more vigorous above-ground plants will tell next Summer. If manure be ready, dig it into the soil this month if practicable. The frost will help it also, and it will mix with and soak through the soil much better than if worked in hurriedly in masses in Spring.

Asparagus Beds—If not already done, put on a coating of several inches of good horse or other manure, at once. The plants will be thus protected and be ready to start earlier and more vigorously.

Bean Poles and Hop Poles will last twice as long if put under cover half the year. Now, before the ground is deeply covered with snow, is a good time to procure a supply for next season. Time is too precious in Spring to stop to hunt them up. Everybody wants them for Lima beans, one of the best and most nutritious products of the garden—good to eat at home, and now retailing in this city for 16 cents a quart, and for more in Spring.

Brush for peas and tomato vines, and nasturtiums, can best be gathered now. Cabbages and other vegetables stored need frequent inspection to see that decay at some point is not beginning to act as a "yeast" to the heap.

Celery left in the ground may need an extra coat of soil to keep out too-hard freezing, or rather to prevent thawing. We always leave it where it grew, deeply covered as required, and as wanted all along through the Winter; cut out cakes of earth if frozen, carry them to the cellar in baskets, and let the soil thaw gradually. The celery comes out unharmed—rather sweeter and tenderer for the freezing.

Cold Frames need extra covering of mats or straw in severe cold weather, but as much ventilation as the state of the atmosphere will admit.

Clons and Cuttings of grapes, fruit trees, currant bushes, etc., may be made at any time now. See under Orchard Calendar above.

Manure—Let abundant stores be now in process of gathering and manufacture—leaves, muck, vegetable refuse—all increase the value of the compost heap. Every gill of water running from the heap is a waste of fertility. If without shed conveniences, a few boards will turn off washing rains. Keep in mind what a cubic yard of good manure will do for a square rod of ground, and then make good use of the rule of multiplication.

Planning—Now is a good time to begin to plot out the garden ground, and then during Winter let (good) seeds for each plot be provided. A garden of moderate size well planned for variety and succession, will supply the table with agreeable food, daily, from the first cutting of asparagus and the early pie plant, until the last gathering of beets and turnips in late Autumn. Decide upon at least one or two new vegetables to be added next season to the old routine of lettuce, cucumbers, beets, onions, potatoes, cabbages, peas, string beans and green corn. There is okra for excellent soup; nasturtiums for the best pickles and beautiful flowers as well; spinach for greens all Summer and (we have it) nearly all Winter; cauliflower, the best of the brassica tribe; it is good early and late, and pickles finely for Winter use. Of these and others, and of the garden fruits, we shall speak more hereafter.

Raspberry and Blackberry canes of all kinds go through the Winter better, and bear much more abundantly and certainly, if bent over and covered with an inch or two of soil. For the tender sorts, this is essential. It takes but a few moments' work.

Seeds—It is better to buy good seed at any price, than to have any thing but the best free of expense. But all good home-grown seeds should be carefully saved from moisture and freezing, from a hot or very dry atmosphere, from a changeable temperature, and from vermin. Seeds will be high next Spring. It now costs double the usual price to get them from Europe. The wet season there, the 10 per cent. duties added, the premium on the currency to pay the duties, and the cost of the exchange to pay for the seeds, will double the price of the large supplies of seeds we have annually obtained from across the Atlantic. Save a few of the best beets, turnips, cabbages, etc., to raise seed next Summer.

Spinach is one of the first Spring vegetables. At the South it may still be sown, but it is too late in this latitude and further North. The Winter spinach remains green all Winter, and may be cut at any time when not frozen or covered with snow. A slight protection of leaves or straw is necessary.

Strawberries—Experience shows that all kinds of strawberries even south of this latitude, fruit better if protected with a slight covering of tan-bark, or leaves or straw. Too much covering smothers them. The rapid thawing and alternate freezing and thawing almost daily when not protected injures the plants.

Flower Garden and Lawn.

Roses and other hardy flowering shrubs, and also hardy shade and ornamental trees, may be planted out, as long as the ground remains unfrozen. Laying out grounds, grading, making carriage drives and walks, etc., may also still be done. This comprises about all in the line of permanent improvements that is now practicable.

Chrysanthemums—Blooms may be preserved until Christmas by merely potting, and removing to the house. Defer dividing roots until Spring.

Evergreens—The lawn on which evergreens are plentifully interspersed, and tastefully located and trained, presents a spectacle that, in Winter especially, is beautiful indeed, and highly in contrast with the naked, skeleton-like appearance of other trees. The evergreens will need a little care to remove excessive burthens of snow from their branches immediately after hard storms.

Flower Pits will require particular attention to keep them sufficiently protected and ventilated.

Lawn—It is not too late to give a light dressing of fine manure and ashes, leached or unleached, if needed. Rolling is also practicable and beneficial in many cases.

Wall-climbers—Protection to tender varieties may be given by making a light wooden frame to set against the wall over them, covering the frame with old carpets, or other material. Of course such vines as may be taken down and laid on the ground can be protected then with less trouble and expense.

Walks are best made by excavating a concave bed about eight to twelve inches deep, with a ditch for draining in the center. Fill the ditch with rough stones, and also the bed to within about three inches of the surface. Then fill up with gravel and sand, and roll thoroughly. Thus made a walk will *stay* made.

Green and Hot-Houses.

Great care will now be requisite to keep up an even temperature, which should not be suffered to fall below 35°, nor to rise above 45° in the green-house; in the hot-house the limits are from 55° to 65°. Where a collection of cactil is kept, 40° is the lowest limit of temperature. A small neglect, especially in localities where sudden changes of weather are common, may sacrifice much.

Large open tanks of water in the house contribute to the equalization of temperature, and also promote the moisture of atmosphere so essential to the welfare of the plants. This moisture is also promoted by frequent syringings or sprinklings.

Mildew—On its first appearance dust affected plants with sulphur, or syringe with sulphur water.

Ventilate thoroughly, especially on mild days, when the house may be thrown open. Also admit a good degree of light. Shutters should be provided for severest weather, but should be kept on only when necessary.

Stimulate plants beginning to start with dilute liquid manure, repeating fortnightly, until in bloom, and no longer. Exterminate insects by washing with strong tobacco water, rinsing it off thereafter with fresh water,

Containing a great variety of Items, including many good Hints and Suggestions which we give in small type and condensed form for want of space elsewhere.

Who wants a Premium!—Our valuable premiums (except No. 11,) are continued (see page 375). These certainly afford a good opportunity to secure some first-rate article wanted, and at the same time to benefit a whole neighborhood by getting the people to read, and think, and make improvements. Will not a paper like the *Agriculturist*, if read for a year in most of the families of a neighborhood, work out some changes in the habits of thought, in the subjects of conversation, and in the fixing up of matters generally?

Note to Correspondents—Explanation.—We are glad to receive all of the thousands of notes, queries, and items of information sent in; but it is not possible to use them all—at least not promptly. From the mass of questions, we first select those which we feel best prepared to answer correctly. Others are put on file until such times as we can hunt up the information, and this can not always be found. Others are sent to persons who can respond better than any one connected with the office—our rule being to always get the best information possible. It thus sometimes happens that several months intervene before an answer appears. Again, the most important, or the most seasonable subjects, or those of most general interest, receive the first attention. And, still again, a great many questions are asked, which are of not the slightest interest to any one but the writer. We have no right to use, for such questions, space in the paper which belongs to a large circle of readers. When possible, and it is not always so, we answer such questions by letter, preferring to expend time, postage and stationery, instead of space. A general rule is, to throw into the waste basket all communications not accompanied by the writer's name. The reasons for this sweeping rule may not always be obvious to others; a brief editorial experience would make them so.

"Much in Little"—Read the Calendar.—Our readers will notice that the pith or substance of a large number of articles, is condensed into the closely printed *Calendar of Operations*, on pages 354 and 355. With far less labor we could have "spun out" the Calendar to have filled up all the pages devoted to larger type: but our aim is to pack into these pages as many hints and suggestions as possible. If our readers did not appear to prefer the present type, we should print the whole paper in the smallest letter, and thus give still more reading matter.

Our Exhibition Tables.—In addition to the large display of Pumpkins, Squashes and Gourds, (reported on page 362,) our tables have presented many objects of interest during the past month, kindly contributed for the public pleasure by a great number of public spirited persons. The space required for the Index compels us to leave over to next month the report of the articles and contributors. We shall be much pleased to have new contributions come in during all the Winter. These tables may be, and indeed have been as interesting as a county fair, and they are open free to the public at all times.

Improved Aster Seed for Distribution.—No flowering plant is more desirable than the China Asters as they have been recently improved by the French and Germans. Some of the flowers are nearly as large as dahlias in size, and far more beautiful in the fineness of their petals. During the past year we have grown about half an acre, to produce seed for free distribution among our subscribers. Owing to some peculiarity of the season, part of the seed blasted, while the most perfect blooms never yield more than a few seeds. Still, we shall have enough of perfected seed to present a dozen or two seeds, or more, to every subscriber desiring them. They will be announced in our Seed Distribution next month.

A Criticism and an Explanation.—A correspondent, who is "nothing if not critical" writes: "....How often you introduce the *American Agriculturist* into your articles. Is not this over-done?"—We give our correspondent full permission to always skip these words when he finds them; but will just say by way of explanation, that more than a thousand other journals receive the *Agriculturist* regularly,—some as an exchange, and some subscribing for it. Most of these have an "agricultural column," and draw largely for this column upon the matter in the *Agriculturist*. Of course the editors usually (not always) intend to give due credit for articles or information that have cost us time, labor, study and investigation, or money. But some *printers* have an inveterate habit of dropping out the credit. In this way, hundreds, yes thousands of good articles have been copied, and then re-copied, without credit, or perhaps with the credit given to the last journal that used them. From careful examination, we find that more than half of all the good and valuable articles, on farm, garden, and household work, now "going the rounds of the papers" unredited, were originally prepared for and published in the *Agriculturist*. So, to mark our own property, we frequently introduce the name of this journal into the substance of an article, where it can not be left out in copying, except intentionally; even this is sometimes done.

Five Dollars Extra.—For three or four years past, we have been sending this journal to one of the most thorough, intelligent, and successful farmers in the country, in return, as we supposed, for his occasional contributions of useful suggestions for our columns. A few days ago the following note accompanied a letter on farming topics: "By the time the *Agriculturist* comes, I feel ashamed at receiving it so long without compensation, for your paper really gives more useful information than any other paper I read; at least it does so in many things very essential to the farmer. Please find enclose $5, as compensation, in part, for the pleasure my family and myself have taken in reading it. Your sincere well-wisher, ——." This is from a man whom we never saw but once, and that was on his well-cultivated farm, nine years ago. His table was then supplied with all the leading agricultural journals of the day. Such kind words of approval, from such a source, are a far greater stimulus to future exertion in our calling, than any pecuniary consideration, though the sum received is by no means unacceptable in these high-priced paper times; it will also enable us to add so much extra to our contributions to aid the soldiers.

Come and See the Pumpkins, etc.—Some of the finest specimens exhibited are decaying, and several are already gone, but there will be, for several days yet, a display worth seeing by those who can make it convenient to call before they are all gone.

Raising Water with a Pump.—W. B. White, Marion Co., Va. There will be no trouble in bringing water in a pipe, up an inclination of 30 feet, perpendicular high, and 65 feet distant. A common suction pump will raise water 30 feet, and bring it through some hundreds of feet. The greater the hight of pipe, the more friction. Theoretically the raising power of a pump depends upon the hight, and not upon the length.

How to Use Muck.—E. Sheldon, Cattaraugus Co., N. Y. It is seldom, if ever, wise to cart muck from the swamp directly to the field and apply it to the growing crops. A better way is to cart it out into some open corner of the lot, and lay it up in heaps, mixing in lime or ashes, say an inch of lime to each foot or so of muck. After it has lain two or three months, shovel it all over, and mix well together. A still better way is to cart it into a shed, and use it as an absorbent of the liquid manure of the stalls. Such a compost is very good, and effects an important saving of liquid manure.

Cotton in Pennsylvania.—John Oliphant, Fayette Co., Pa., sends to the office of the *American Agriculturist* a very good sample of cotton grown by himself. It was not planted until late, otherwise Mr. O. thinks he would have ripened all put in. He thinks it will be a paying crop there even at half present prices. P. S. Other samples are coming in just as we go to press. They will be noticed hereafter.

"Rags" at a Premium.—The most independent man we know of just now, pecuniarly or otherwise, is the one who most abounds in rags. Good white rags which the gatherers but recently took from economical housewives as a favor to them, at 1½@2 cents per pound, paying in "tin ware," are now in quick cash demand at 10 to 14 cents, in this City. Their bulk, and troublesome transportation, makes the country price considerable less; but all the family rag-bags in the country can now be emptied at double or triple the old prices, and for cash at that. Good housekeepers will do well to make a note of this. It will not take a great number of pounds to pay for the *Agriculturist* a whole year, and one gets back in the *Agriculturist* all the paper made from four or five pounds of nice white rags, in the course of a year.

Flax Tow Wanted—Hemp.—Recently a number of paper manufacturers and dealers have called at the *Agriculturist* office to inquire where flax and hemp, especially flax, are largely cultivated.—They keep quite private as to their reasons for the inquiry, but we strongly suspect it has something to do with an attempt to turn tow, and perhaps hemp waste, to account in making of paper, owing to the scarcity of rags. Will our readers please report any facts they have in regard to this crop, where grown, etc., it may perhaps be of mutual advantage to both manufacturers and flax growers.

Grape Vines for a City Yard.—"A New-York citizen" writes: "The *Agriculturist* has convinced me that I can derive both pleasure and profit from having a few grape vines in my city lot, to train against the house and high fence. I have room for only about four vines, and would like as many varieties. What shall I get, and where?"—*Answer.*—Try an Isabella, a Concord, a Hartford Prolific, and a Delaware. Except this month, you will usually find them advertised in our columns by several reliable growers; or you can get them through Lane's Purchasing Agency, at 151 Nassau-street.

Books Wanted for Sick Soldiers.—A Hospital for invalid soldiers has been established on David's Island near this City, where a large number are constantly receiving attention. A library for their use has been commenced, and contributions of suitable books and magazines are solicited. No better disposition can be made of the thousands of old volumes of readable matter which have been perused and are now lying useless in the houses of many families. They should be sent (free of cost) to "Evangelical Knowledge Society, No. 3 Bible House; or to William E. Dodge Jr., 19 Cliff-st., N. Y.

Shaver's Eraser, Polisher, etc., is a neat little instrument for the writing desk, serving the quadruple purposes of an eraser, polisher, paper-cutter, and folder, and also as a pencil-sharpener, costing from 50c. to $1, or more, according to the style of finish. It is manufactured at New-Haven, and furnished quite as cheaply as the less convenient imported article.

Book on Implements.—W. Ellis, Fairfield Co., Conn. The Young Farmer's Manual, by S. E. Todd, contains good, practical, common-sense directions respecting agricultural tools and implements, together with a large amount of other excellent matter relating to farming. We can forward it post-paid upon receipt of the retail price, $1.25. Thomas' Farm Implements is also a good book on the same subject; price $1.

Double Hyacinths.—"Flora." The first double hyacinth was obtained in the year 1710, or thereabouts, by a Hollander, of the name of Peter Voerhelm. The "hyacinth soil," of which the Dutch have so long made a secret, is simply this: Of rich garden soil, four parts; of sand, four parts; of black mold and cow-dung mixed, three parts; rotted leaves, one part.

The Calceolaria.—"Jane," Syracuse, N. Y. It was first brought into Europe, from Chili, in the year 1773, though, for some reason, it was not much disseminated until 1830. It has been wonderfully improved by hybridization. In 1832, the Messrs. Young, of Edinburgh, sold some of their new hybrids for $10 the plant.

Silkweed or Milkweed, (*Asclepias cornuti*) is the name of the plant bearing pods, sent by P. C. Wadsworth, Town Hill. Its uses are referred to on page 325, November *Agriculturist*.

Cider Wine.—The Country Gentleman gives the following from a correspondent: Take pure cider, made from sound ripe apples, as it runs from the press, put 60 lbs. common brown sugar into 15 gallons of cider, let it dissolve, and fill clean sweet casks with the mixture within two gallons of being full; put them in a cool place, leaving the bungs out for 48 hours; then bung up, leaving a small vent until fermentation wholly ceases; then they are to be bunged up tight, and the wine will be fit for use in one year. It improves with age, and may be left upon the lees.

Medicine for Summer Complaint.—"F. M. H.," probably a physician of this city, thinks the recipe published on page 230, August *Agriculturist* calculated to do harm, as the proportions are not given. Besides, he says, there are so many forms of Summer complaints (derangement of the alimentary canal) that only a skillful physician can properly distinguish and prescribe for them. Pure air and proper diet are recommended as the best preventives, and a good physician to effect a cure.—We seldom notice communications, when not accompanied by a responsible name.

Correct Use of Terms.—D. D. Prettyman, Salem, Oregon. As *custom* forms our language, and as custom invariably puts bread before butter, "bread and butter" is preferable to "butter and bread."

Fattening Qualities of Sheep.—Experiments instituted by Mr. J. B. Lawes, of England, to determine the relative aptitude to fatten, of different breeds of sheep, resulted as follows: To make 100 lbs. of live weight, the Sussex breed consumed 297¼ lbs. of oil-cake, 285¼ lbs. of clover, and 3,835¾ lbs. of Sweedish turnips; the Hampshires, 291½ lbs. of oil-cake, 261¼ lbs. of clover, and 3,966 lbs. of turnips; Cross-bred wethers, 264½ lbs. of oil-cake, 251¾ lbs. of clover, and 3,725¼ lbs. of turnips; Cross-bred ewes, 263½ lbs. of oil-cake, 250¼ lbs. of clover, and 3,671 lbs. of turnips; Leicesters, 263¾ lbs. of oil-cake, 251¼ lbs. of clover, and 3,761 lbs. of turnips; and Cotswolds, 253½ lbs. of oil-cake, 216¾ lbs. of clover, and 3,557 lbs. of turnips.

More Good South Downs.—Hon. E. Cornell, Prest. N. Y. State Agricultural Society, has received in excellent condition nine very fine South-down yearling bucks and fifteen ewes purchased hy him at the final sale of Jonas Webb's flock. We are glad to notice that Mr. Cornell proposes to let the bucks. This opportunity to improve their flocks should not be lost by breeders.

Increasing Weight of Wool.—E. T. Hardy, Floyd Co., Iowa. The weight of wool will not be increased by exposing sheep to the full severity of Winter. Its growth depends largely upon the good condition of the animal. If poorly fed, the scanty nourishment, after sustaining life, will leave little surplus to be appropriated for wool. Shelter during excessive cold, diminishes the amount of food needed to supply animal heat, and more food therefore goes to producing wool.

Buckwheat Straw unfit for Bedding.—W. A. Floyd, Orange Co., N. Y., writes to the *American Agriculturist* that buckwheat straw used as bedding for animals causes an eruption upon the skin, which though not especially dangerous causes great irritation and discomfort. Rye or oat straw is every way better. [This may be so, but we have thought the prejudice against buckwheat flour and straw, as being productive of skin diseases, to be a mere fancy.—Ed.]

Cut Straw for Bedding.—L. D. Weber, Luzerne Co., Pa. It would hardly pay to cut straw by hand for hedding a large number of cattle. Where a horse-power cutter is used, it may be advantageous. The cut straw is much more readily mixed with manure and rotted, and the soiled parts of the bedding are more easily removed without waste. Four to six inches in length is sufficiently fine for bedding.

Grain for Young Animals.—C. T. Wilson, Cayuga Co., N. Y. A small amount of grain fed to young animals in Winter will improve their growth and strength. It is not best to make them fat by overfeeding; give only enough to keep them thriving. More animals are stunted by insufficient food while young, than are injured by too early graining.

Value of the Milk Crop.—It is estimated that the entire milk crop of the United States, for the year 1860, reached $160,000,000. New-York State produces as much milk as all the New-England States, together with New-Jersey, Delaware, and Maryland.

Large Cattle.—W. B. F. Davis, North Berwick, Me., challenges the West to beat a yoke of oxen owned by Capt. Francis Hurd. They were 7 years old last Spring. They stand respectively 5 ft. 4½ inches, and 5 ft. 10 inches high, girt 9 ft. 1 inch and 9 ft. 4 inches, and are 9 ft. 6 inches in length. June 1st, 1864, they weighed 6964 lbs.; Sept. 3d, 1862, they had increased to 8330 lbs., one weighing 4120, the other 4210 lbs.

An Ugly Customer.—C. R. Tyler, of Perry Co., Wis., sends to the office of the *American Agriculturist* the tanned skin of one of the aborigines of that State, a rattlesnake, 5 ft. four inches long, weighing when killed, 6 lbs. Its rattles, 14 in number, indicate it to have been an old settler, and an ugly customer to meet.

Enormous Yield of Buckwheat.—Andrew S. Nash, Westport, Conn., sends to the office of the *American Agriculturist*, a sample of buckwheat which yielded *at the rate of* 2137½ bushels per acre. It should he stated however that the product of only a single stalk with its branches, was ascertained, amounting to 2850 kernels. From this anybody can cipher out the above yield per acre, on paper, *provided* three pecks were sown, and each seed gave a corresponding yield. When any one succeeds in ciphering it out with the plow and thresher, we shall be glad to tell how it was done.

Ice-Houses in Cellars.—T. E. Bennett, Dutchess Co., N. Y. Ice may be kept as well in the cellar as in any other place, if care be taken to exclude air and provide for drainage. Lay scantling upon the cellar bottom in one corner, and build up a double walled box of the dimensions required. Lay a foot of straw upon the bottom and six inches of sawdust or spent tan-bark upon this. Fill in the sides with the same material, and place it between each layer of ice. Finish at the top with an extra layer of straw or sawdust.

Bushel of Grain in Maine.—W. B. F. Davis, North Berwick, writes that in Maine, the statute bushel of corn is 56 lbs., barley 56, oats 30, potatoes 60 lbs.

Cluster Oats.—A. C. Ballict, Venango Co., Pa. The specimen is curious, but is probably only a sport, and not a fixed variety. Such anomalies may sometimes produce a similar succession, but the tendency will be to return to the normal condition. There is a pleasure in experimenting in this line, even though no permanent good comes of it.

Use for Bitter Pumpkins.—Specimens of very bitter pumpkins were sent to the *Agriculturist* office a few years ago and we spoke of them as being of little account. N. H. Lyons, Susquehannah Co., Pa., writes us that they are a good substitute for hops. He cuts them into rings and dries them, after which a piece is boiled in water and the liquid used precisely as one would hops for yeast. He lost his seed by planting too near other pumpkins.

Sorghum in California.—The culture and manufacture of Sorghum in California this year has been very successful. Fields of from five to thirty acres have been grown, and preparations are being made to cultivate on a large scale next season.

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30 Barrels of Sorghum Syrup per Day.—The Prairie Farmer describes a manufactory at Loda, Ill., where the above amount of syrup is turned out. The mill was erected to accommodate farmers who agreed to deliver 800 acres of cane to be manufactured. Two large grinding mills and a set of evaporators are kept at work night and day, using up about 10 acres of cane in 24 hours. The evaporation is done by steam which also furnishes the grinding power. The syrup is of fine flavor, but rather dark colored, as help can not be had to strip the cane before crushing. The refining process is expected to remove the coloring matter.

Uses of the Roller.—"James." For making and keeping a lawn in fine condition, the roller is indispensable. For farm purposes, it is very useful in the Spring, to press back roots of grain and clover that have been thrown up by the frost; to level down ant-hills; to press into the earth small stones and bones that would otherwise dull the mower's scythe; to crush clods of dirt, and bring the soil into close contact with newly-sown seed; and to give grass a firmer and finer texture.

Keeping Onions in Winter.—H. Warner, Essex Co., Mass. Onions for winter keeping should be stored in a dry, cool place. A little frost does not injure them if kept covered and not handled until thawed out. An upper floor is generally better for the purpose than a cellar, which is apt to be too damp.

Sowing Beets with Carrots.—Rev. J. Fletcher, of Hartford Co., Conn., whose readings of the *American Agriculturist* have led him to experiments of various kinds, has settled upon the plan of sowing alternate rows of beets and carrots, putting in Altringham carrots early in the Spring, 5 feet apart, and sowing white sugar beets between the rows about the 25th of May. He manures heavily, plows deeply, and trench plows by running a light one-horse plow in the bottom of each furrow. He thinks a much greater crop can be thus raised than when on separate plots.

Tansy Tea will Keep off Bugs from the vines of squashes, pumpkins, cucumbers and melons; so says Mr. J. W. Staples, of Orange County N. Y. He informs the *American Agriculturist* that he has tried it repeatedly and always with perfect success. He steeps the tansy plants in a kettle to a strong tea, and then sprinkles it over the vines with a brush. The bugs curl up and drop off, and cease to trouble the vines. A second or third dose is applied after a rain, or when a new crop of bugs comes out. A tubfull of the tea can be prepared at one time, and kept on hand for use as wanted.

Keeping Ants from Trees.—W. Clark, Fulton Co., O. We know no better way to prevent ants ascending trees, than to surround the trunks with sheets of strong paper covered with gas tar. This substance remains sticky a long time, and would prove a hard road to travel for insects. It should not be applied directly to the bark—young trees have been injured by it.

Girdling Trees.—"J. S. jr.," Chester Co., Pa., inquires if the roots of trees can be killed by girdling the trunks at any particular season of the year, so that young sprouts will not start the following Spring. They would probably decay soonest by girdling in mid-summer when the tree is in full leaf.

Evergreens for Shelter Hedges.—O. H. Wadsworth, Moultrie Co., Ill. Evergreen trees are best for screens because they retain their foliage in Winter, and thus break the force of the wind. They should be set in double rows, the outer or most exposed one of pines and spruces, the inner of hemlock and arbor vitæ. In a few years they will form an almost impervious wall about the enclosure.

Evergreen Tree Seeds.—C. R. Griffin, Riley Co., Kansas. Seeds of White Pine, and other evergreen trees can be had of J. M. Thorhurn & Co., this city. They are usually planted in Spring, and will doubtless flourish in Kansas; they grow almost everywhere. It is well to put the seeds in boxes of moist earth during the Winter, or at least to get them into the ground very early in Spring.

Chickasaw Plum.—S. Kinsey, Montgomery Co., Ohio. This is a wild variety not worth cultivating, now that our list of choice plums is so large. It makes a good stock on which to bud other sorts, at the South, but is not perfectly hardy at the North.

Cheap Apples.—One of the Portland (Me.) journals says that a merchant of that city has contracted for 1,000 barrels of good Baldwin apples to be delivered at $1 per barrel.

Origin of the Montgomery Grape.—J. A. Montgomery, writes to the *American Agriculturist*, in relation to the origin of the so-called Montgomery grape, that he procured it from a German living in Lycoming Co., Pa., who could give no definite account of its origin or true name, but who probably brought it from Europe with other varieties. Mr. M. sent some of the vines to Poughkeepsie, N. Y., from which the present stock has been procured by different parties. It is not hardy.

Grape-Growing near Cincinnati.—A correspondent of the Genesee Farmer says that within 20 miles of Cincinnati over 2,000 acres are now cultivated in vineyards, mostly of the Catawba variety.

White Seedling Grape.—F. Kindley, Wabash Co., Ind. Grapes received in fair condition, and we judge them worthy of propagation, as a sweet, vinous grape, with little pulp. The vine is doubtless a seedling.

Michigan Seedling Grape.—Samples received from N. R. Haskell, Monroe Co., Mich., were submitted to the *Agriculturist* Fruit Growers' Meeting, and pronounced to be Catawbas which a favored position or a more vigorous vine had ripened earlier than some immature Catawbas sent at the same time.

Earliness of the Rebecca Grape.—"John." With us, it ripens between the Delaware and Diana, yet improves by hanging long on the vine. It is too tender and too slow of growth, to suit this fast age.

Pears—Winkfield, *not* Wakefield.—Two correspondents take to task the type-setters and proof-readers, and indirectly the editors, of the *American Agriculturist*, for "ignorantly or carelessly always printing the name of a pear, *Vicar of Winkfield*, instead of *Vicar of Wakefield*." The pear in question was obtained from the woods of Clion, France, by a *Curate* living near, and was there called *Le Cure*, (Vicar.) It was soon after introduced into Winkfield, (not Wakefield,) England, and being disseminated thence, it received the name *Vicar of Winkfield*. Our printers and proof-readers are right. This variety is a good bearer, and *has* been in good repute, but there are plenty of better kinds.

Cranberries in Winter.—"Novice." Cranberries should be kept flooded if practicable during Winter, otherwise the frost heaves out the roots, and injures the bearing the following season. We know of no upland variety that gives as certain returns as those taken from swamps, sometimes called upland.

Wintering Stocks and Wall Flowers.—C. N. Doane, Queens Co., N. Y. It will not be enough to cut these down and cover the roots with leaves or additional soil. They must be so kept as not to be frozen. The only really safe place is a pit, house or cellar.

Have you Rhubarb or Pie Plant? This supplies one of the earliest and best materials for pies and table sauce, and is believed to be tonic and healthful. It is very readily grown, and a dozen or fifteen one-year old roots will supply a large family, one year after setting. The Linnæus variety yet stands at the head. It is now quite common, and 1-year old roots or crowns can be purchased of most commercial gardeners and nurserymen. But those who can not get the roots of this variety should sow the seed. This does not always follow the parent plant in character and value, but is likely to produce a good sort, and sometimes even an improved one. We have many promising reports already from seed sent out by us so abundantly the past year, and we shall not be surprised if in several instances the favorite Linnæus be far eclipsed by its offspring. We have again saved several bushels of the purest and best seed, parcels of which will be sent free to all our subscribers needing it. It will be in the seed list next month.

Humbug—A Caution.—Better avoid all the so-called "Insurance Companies" offering to insure soldiers against drafts, sickness, wounds, etc. A magnificent Company (on paper) nominally in Wall-street (really nowhere that we can find) has recently succeeded in humbugging even some of the sharp editorial fraternity, into publishing half a column or more of advertisements, under promise to pay in the future.

Deferred Items.—A large number of basket items are crowded over to next month by the index.

SUNDRY BUSINESS ITEMS, ETC.

1000 December Copies Free.

The extra November edition, offered free to new subscribers, lasted not quite to the middle of the month. Of this (December) number, we will print 1000 extra copies, to be presented to the first 1000 *new* subscribers received for the next volume. All new names sent in prior to Dec. 1st, of course receive the December number, as previously announced.

A Request, and Why Made.

As soon as one number of this paper is mailed, our men commence writing mail wrappers for the next, and these are all called over again and compared with the books, to be sure that there are no mistakes. They are then tied up in bundles for each State, county post office, etc., so that as soon as the printing commences the mailing begins, and follows the presses. But this month, we must delay the wrappers until the renewals are received and entered in their appropriate places in the books. This takes much time and care. We do not wish to put on inexperienced men who might make mistakes, and so our old clerks and bookeepers work almost night and day towards the last of the month. It will greatly lighten the labor, and assist in getting the books regulated, and in the prompt mailing, if our readers will send in as many names as may be convenient very early in *December*.

☞Please always write names plainly, and give without fail the *Post Office*, County, and *State*. Let letters be short, and all business matters on a separate sheet from other topics; put name, address and date, on each sheet.

Two Men

Cultivate the same kind of soil, side by side, with equal market advantages; the one prospers, and the other does not. Why?—*Answer.* One plans better than the other. He gathers all the suggestions from others that he can, and keeps thinking them over himself. Reading about what others do or think, helps a man think himself. Please throw out this hint to a neighbor or two, and ask them to get some good paper, specially devoted to their own pursuit. If they can get no better, let them try the *Agriculturist* for a year.

Send Along the Items.

Anything that our readers can contribute, in the way of successful or unsuccessful experience, queries, hints, suggestions, etc., will supply material, and add to the general fund of knowledge. Just what one cultivator would talk about with his neighbor, concerning his experience on his farm, or in his orchard or garden, or concerning household labors, is just what we would like to have talked over in the *Agriculturist*. It will be fully as valuable when read in printed lines, as when heard in conversation, though some are afraid of anything coming in the form of "book knowledge." Now, when so many thousands are sending in their renewals, let us receive a store of useful material to work up during next year.

☞ Let all such matters be on a *separate piece* of paper from business items, so that they can go to the editors' tables. All money letters are numbered and kept on file by themselves. Each piece of paper should contain the name and address of the writer, and the date.

Great Advance in Printing Paper, but No Increase in Subscription Prices.

A CARD.

Perhaps no other class of persons are now feeling the effects of the war more than publishers. Formerly, a large amount of cotton waste from the cotton manufactories was used in making paper. Now that waste is worked over into various fabrics; and more than this, while cotton rags are reduced to fibre and used in Canton flannel, and even in muslins. As a consequence, "paper rags" are so scarce that paper manufacturers can command their own prices. As an illustration, our paper purchased in advance for part of the next volume cost us nearly a thousand dollars more for *each number* than it did a year ago.—There have been many consultations among publishers, and it has been concluded necessary to advance the rates for papers supported mainly by subscriptions, and by most of those depending upon advertisements. But owing to the prosperous condition of the *Agriculturist* even in this war year, we still keep the price the same, without at all diminishing the intrinsic value of the paper. If the price of paper continues to rise, it may require some sacrifice for the time being, but we prefer this, rather than to vary the terms from what they were twenty one years ago, and have been nearly all the time since. As soon as the four million bales of cotton now locked up in the south are brought into the market (and we are sure they will be in less than one year) printing paper will decline again.

In consideration of the above announcement, however, we solicit all our friends to assist in making the subscription list as much larger as possible. Taking into account the amount expended in obtaining and condensing information, the exclusion of a large most profitable class of advertisements because likely to lead our readers astray, and the low subscription price maintained, we think the *Agriculturist* will be conceded to be the cheapest paper in the country. The truth is, that by publishing so large a number, and having only one office, one set of editors, engravers, printers, stereotypers, etc., for the whole, we are able to give more for the same money, than if the general expenses, aside from printing paper, were divided among a few thousand subscribers only. Every name beyond fifty thousand or so costs only the paper, presswork, and mailing. We again ask our friends to make a special effort this month to add as many names as possible. All the proceeds will go to make a better paper for the whole, and then each will in turn be benefited.

Does it Pay?

Just now, many of the fifty or sixty thousand persons whose term of subscription expires with this month, will perhaps insensibly ask themselves whether it will *pay* to renew for another year. Let us see. The index and reference figures to Volume 23, given in this number, indicate that there have been about *two thousand* separate articles and items. Many of the short items have involved no little care, investigation, and condensation. These with the Calendar, have embraced many thousands of hints and suggestions. Probably no one person has been interested in, or benefited by the half of this; and has not every reader received some hints that are worth more than the subscription price? In estimating, it is proper to consider not only the hints directly and plainly valuable, but also the trains of thought set in motion, and the results indirectly growing out of them. In other words, would any one be willing for a single dollar to blot from his or her mind all the information, and all the thoughts suggested by what has been perused in this journal this year? We think not. We believe that the poorest paper published, if it only sets men to *thinking*, will, in the end be valuable. It is thought and calculation, that make one person's labors more profitable, and more pleasing than those of another. All we can say further is, that the next volume will be no less valuable than the past, and we ask only those to patronize it who, on looking over the whole of the past year, believe that another volume will pay. We will also take it as a favor, if those who think it pays for themselves, will also suggest to their neighbors and friends, that it will pay them to take it.

Cotton Exhibition Postponed.

We have several responses to last month's request, in regard to the proposed exhibition of Northern Grown Cotton; but, few have the required amount, and those who have, prefer, at its present high price, to use what they have in experiments in home manufacture, rather than to prepare and send it to an exhibition in which they are not *sure* of receiving a large premium in competition. Several suggest a postponement of the exhibition to next year, and then have an early, definite announcement as to the conditions of growth, the amount of surface, the cost of production, etc. Under these circumstances, and as only one unconditional offer to exhibit has as yet been received, it would seem to be expedient to postpone the exhibition for this year. In the meantime we hope to hear from those who have experimented the past season, and thus secure at least one object of the proposed exhibition, namely: To learn how far North the plant has succeeded well, and what are the conditions of growing it profitably.

Free Distribution of Seeds.

When possible, we have always announced in the December AGRICULTURIST the list of seeds to be presented to our subscribers for the next year. These seeds have been in part grown specially for the purpose, by ourselves and by others for us, and in part obtained from Europe. But owing to unexpected delay in receiving information from some of our correspondents abroad, and to other causes, we must necessarily delay our seed announcement until next month.

The Premium Maps Discontinued.

All Premium Maps offered have been promptly sent off in every case, except a few of those of the Southern States, which we were disappointed in obtaining, for a time. *All* have now been sent, however. Owing to the advance and scarcity of paper to print them on, they were not only delayed, but the price of all was increased twenty-five per cent beyond what we expected to pay when making the offer. On this account, and from the difficulty experienced in obtaining a supply, we shall send no more after the expiration of the previous offers, which extended to November 30th, with sufficient extra time to very distant persons. When desired, we will procure and send others, when paid, as follows: The map of Virginia, and that of the Southern States, at twenty-five cents each; and the map of the United States, including Canada and New-Brunswick, at fifty cents each.

Postage Stamps still Received—Drafts—Demand Notes.

Many shop-keepers, all the omnibus and railroad lines, and several newspapers, in this city, have announced that postage-stamps will no longer be received as currency. In the present lack of small change, we deem this course detrimental and inconvenient for the public, and so far as we are concerned, shall continue to receive all undefaced, clean postage stamps offered for subscriptions or single copies, where there are fractional parts of a dollar to be paid. For even dollars, bank bills are of course the best.

A draft on a New-York city bank, payable to the order of the Publisher, is the best method of sending large sums. The rates of exchange are now so nearly uniform over the country, that drafts on New-York can be purchased quite cheaply of any Bank or private Banker.

Subscribers on the *Pacific coast*, and in Utah and New-Mexico, can send new postage-stamps of United States Demand-Notes (which are at par here,) or Drafts for large amounts.

American Agriculturist in German.

The AMERICAN AGRICULTURIST is published in both the English and German Languages. Both Editions are of the same size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs. A club may be part English, and part German.

Bound Volumes and Back Numbers can be Supplied.

We shall immediately bind up a number of volumes of this year to supply when wanted. (See terms below.) Those who have a part of Vol. 21, or of any other volume back to XVI., can receive the lacking numbers at a price proportional to the whole year, adding one cent more per number for postage, as this must be prepaid on copies not sent out when issued.

PRICES AT THE OFFICE.

Volumes 16, 17, 18, 19, 20, and 21, *unbound*.....$1.00 each.
Volumes 16, 17, 18, 19, 20, and 21, *bound*.....$1.50 each.

PRICES WHEN SENT POST-PAID BY MAIL.

(*They can not go unpaid.*)

Volumes 16, 17, 18, 19, 20, or 21, *unbound*.....$1.12 each.
Volumes 16, 17, 18, 19, 20, or 21, *bound*.....$2.00 each.

BINDING.—Sets of numbers sent to the office will be bound up neatly in our regular style of binding the *Agriculturist* for 50 cents a volume.

PREPARED COVERS.—Covers for binding, neatly made, with title, etc., gilt upon the back, ready for the insertion of the sheets by any bookbinder, can be furnished for Vols. 13, to 20 inclusive, at 25 cents per cover. *Covers can not go by mail.*

PRIZE FOWLS AT THE EXHIBITION IN LONDON.

(Engraved for the American Agriculturist.)

A few years ago, when the hen-fever was widely prevalent, the above engraving would have created no little excitement. We should have expected visits from fowl fanciers, letters from distant points, and no end of inquiries, as to where specimens and eggs might be procured. Now they will merely be looked upon as curiosities, particularly the Japanese Bantams shown in the foreground. They are indeed singular specimens of the feathered race. Their legs are not more than one or two inches long, and their feathers very curiously frizzled, resembling the style of dressing the hair, in Queen Elizabeth's time. Of the particular value of these fowls for laying and breeding, we have no account. They have not long been introduced to England from their native country. Their tall companions, named the Crevecœur, are also a new importation from the East. In general characteristics they appear to resemble their Shanghai cousins, of which, in their primitive ugliness we have had more than enough. The above engravings are from prize specimens, shown at a recent poultry exhibition in London.

Although many varieties of poultry more curious than useful have been introduced, in consequence of the hen-fever, it has not been without beneficial results. Several breeds of superior excellence, which previously were almost unknown here, are now common, and our native stock has been much improved by various crosses. The extra care, also, bestowed upon favorites for which high prices had been given, was so well repaid by increase in eggs and weight, that others have taken the hint, and it is found profitable to give good care to poultry. It has been proved that with proper attention, a full supply of eggs the year round may be had from comparatively a small number of hens. The particulars of successful poultry raising have so often been noticed in our Calendar and elsewhere, that we need not now repeat them.

For the American Agriculturist.

Keeping Horses in Winter.

The first thing of importance is a good stable, which should be warm, light, dry and well ventilated. Each of these conditions must be observed to insure the health and comfort of the horse. The cold winds must not be permitted to blow upon him, nor damp, foul air fill the stable. Let a plentiful supply of pure air and light be admitted through windows or blinds. The stalls should be 14 feet long and 5½ wide; mangers for hay are preferable to racks, as the horses are less liable to waste their hay by getting it under their feet. The manger should be about 3½ feet high next to the stall, and 6 inches higher in front; about 20 inches wide at the top, 14 at the bottom, and extend to within 16 inches of the floor, which will leave room beneath for the bedding. The top piece on both sides of the manger should be 2 inches thick, of hard wood, to prevent the horse from gnawing. The feed box should be in the right hand end of the manger, and made of two inch hard wood plank; 16 inches square is a good size. The partitions between the stalls should be about 8 feet long, and it is best to have them so high in front that the horses can not get their heads together.

When the horse is idle, two quarts of oats given morning and evening, with plenty of good hay, will keep him in good condition. If corn is fed on the ear, two or three common sized ears will answer the same purpose, or three quarts of corn and cob meal per day. If at light or medium work, four quarts of oats, six ears of corn, or three quarts of corn and cob meal, should be given three times per day, with all the hay he will eat. If at hard labor, six quarts of oats, ten ears of corn, or four quarts of corn and cob meal, will be required. Whole corn is not economical food for horses, as much of it will pass through them undigested; but as it is used by many farmers, I give directions for feeding it. In feeding new corn, care must be taken not to give too much at first, as it is very liable to give horses the colic. Many, perhaps the majority of farm horses, in our part of the

country, are kept upon much less grain than this, but they do not look as we desire our horses should—fat, sleek and comfortable, and *always* ready for service. Carrots are very good for horses, and instead of feeding grain alone, an equal quantity of carrots may be substituted once a day with great benefit. Roots have a tendency to keep the bowels loose, and a horse will thrive better and look much better if carrots can form a portion of his food. An occasional "bran mash" is very good for the same purpose. To make it, scald four to six quarts of shorts, add a little salt, and feed after it has cooled sufficiently. Horses should be watered regularly, at least three times per day; our rule is, water after eating in the morning, before eating at noon, and before eating at night.

[The address of the writer of the above, has been mislaid. It is part of an essay in competition for prizes.—ED.]

From a Farmer in Iowa.

Raising Hogs by Wholesale.

The *Prize Article* on "Raising and Fattening Swine" published in the *American Agriculturist* for August, p. 235, is very good for operating on a small scale. But, as it is here, where from 50 to 1000 head are raised by farmers annually, how can stys be built for them? The lumber and nails for such a purpose can not be afforded. Now I am not advocating feeding hogs in their *wallow*, not by any means, nor letting them lie without shelter. But these things can be provided cheaper than by building stys. The writer of the prize article discards the idea of giving swine any freedom. I have found that in no way can a drove of hogs be advanced so fast through the Summer, (*i.e.*, taking into account the expense, the health of the animals, and the quality of the pork,) as by turning them into a field of rye in the Spring (sowed the Fall before). That will last them until a crop of oats can be grown. Then turn them into that field, or if you please, on a good crop of clover and timothy, in place of the oats. Give them such a lot, with access to plenty of good water, and if you have plenty of corn, a small feed each morning won't hurt them. Let them run thus until October, then shut them up and feed on scalded meal or corn. In this way I venture to say that by Jan. 1st, I'll have a heavier lot of hogs, (with just as good meat) than the man who keeps his pigs in stys, while mine will cost at least 25 per cent. less than his, to say nothing of the *trouble* of feeding through the Summer. I do not speak at random in regard to these things, for I've seen both ways tried. IOWA SUBSCRIBER.

A Comfortable Bed for Animals.

What man or beast does not enjoy it? Every wild animal, from the lordly lion to the insignificant mouse, bestows careful pains upon its nesting place. The universal instinct which prompts this ease, indicates that it is a matter of no small importance in the physical economy. About one-third of an animal's whole life is passed in resting, and nature intended that during this time its condition should be most favorable for restoring and building up the organization. In the care of domestic animals, kept for profit, this point is worthy of special attention. Comfortable bedding directly favors the increase of fat and muscle by helping to retain the animal heat, and also by adding to quiet and comfort. In this way a bundle of straw upon the outside may be equivalent to a feed of grain inside. Horses are usually well cared for in this respect, with a view to keep their muscles in good order, as every tyro must know that sleeping upon a hard board will scarcely give pliancy to the limbs. But good bedding is of little less benefit to cattle. If it be doubted, experiment for two weeks with milch cows; give them comfortable litter the first week, and allow them to lie upon the frozen ground the second, then note the difference recorded in the milk pail; it will be very great.

Straw and refuse hay are generally used, and are well suited for bedding. Cutting into lengths of say six inches, has some advantages, though it would hardly pay if required to be cut by hand. Where these can not be had cheaply, as is often the case in villages, an excellent substitute may be found in leaves. They possess one advantage over straw, in making the very best manure for gardening, when mixed with animal excrements. Spent tan bark, well dried, is another good substitute, also valuable as a mulch. A layer of dried muck, six inches thick, serves a good purpose for bedding. It is a most excellent absorbent, and will remain in good condition for some time without being changed. When well saturated it is just the article for the garden or the field. With proper care in furnishing abundant bedding for stock, a large accession to the manure heap will be made, sufficient of itself to pay for the trouble.

For the American Agriculturist.

Mules Valuable for Farm Work.

If any body wishes the mule for a saddle-beast, he is welcome to his choice, and he will have good company and good examples before him. In Persia, Syria, Spain, Italy, and indeed in nearly all semi-tropical countries, these animals are often used for riding. For rough, mountainous regions, they are invaluable, being so sure-footed. By a little training, too, they can be brought into a very agreeable gait. A foreign writer says: "In Bagdad, most of the learned and holy professions prefer the ass, as do all the ladies. They are of a particular breed, and often brug fifty pounds sterling, ($250). The favorite color is spotless white; they are magnificently caparisoned, and have their nostrils slit, which is said to make them long-winded. Surely, their wind is long enough when they bray! The bray is not much admired, generally, but the author of a scarce tract on the nobleness of the ass, (1595,) after giving us all its sweet notes, concludes by declaring that the continued braying of five or six asses forms a melodious kind of music, 'a song of world without end.'"

But it is with mules, as draft animals, that we have now especially to do. They are sometimes from fourteen to sixteen hands high. They are stronger, surer-footed, and more durable than common horses. They are subject to comparatively few diseases. The expense of shoeing them is slight. They will live and thrive upon one-third less than horses, and eat contentedly the cheapest and coarsest kinds of food. Yet, it is a little remarkable that the ass is quite fastidious about his drink, preferring only perfectly pure water. Hence the meaning of a passage in an ancient classic: "Thersites, would that the fountain of your mind were clear again, that I might water an ass at it."

Much has been said about the obstinacy, stupidity, and viciousness of the mule. But whether these alleged vices are not owing chiefly to the ill-usage he gets, is perhaps an open question. Mules are seldom known to die, or to become old; we never yet met with one called much over ten years of age! At least, their age is seldom thought of in purchasing; for they are serviceable for thirty years or more. We are glad to see that they are being used more and more for farm work. NON EQUUS.

Harness for Oxen.

In reply to an inquiry about harnessing oxen, in the October *American Agriculturist*, I send an account of what I have seen. For more than a generation the people of Selkirk settlement, 500 miles or so Northwest from Saint Paul, have used one-ox carts, the ox being harnessed between shafts, as nearly after the manner of horse harnessing as the shape of the animal will admit. The carts are of very rude construction, no iron entering into their composition, and no lubricator being used, and yet each ox transports a load of 800 pounds from Selkirk settlement to St. Paul, at the rate of 20 miles or more per day. They usually go in long trains, 80 or 100 carts, and the creakiug of the ungreased axles, wood running in wood, can be heard for miles. Within two weeks past there has arrived in Denver, from Council Bluffs, a train of 12 carts on the same plan, but built in the best manner, with thimble-skeins, each cart bringing through 1200 pounds. This is much better than can be done with 4-wheeled wagons, for in that way 4000 is all that three yoke of good cattle can manage.

Colorado Territory. E. K. WOODBURY.

Wintering Bees in a House.

The method of wintering bees practised by Mr. Hogan of Dupage Co., Ill., is thus described in the Prairie Farmer: He builds a house of suitable size to contain his stocks, something like an ice-house, of joists, clapboarding the outside and lining the inside with matched siding, leaving a space of four inches all around. This is filled with chaff (spent tan-bark would do as well), and the hives are ranged four tiers high all around the inside. To ventilate it, he constructs an air tube from the outside under ground to the center of the house, where it is admitted through a perforated board or plate of metal. At the top a passage is made for the heated air to escape. The whole is arranged to exclude every particle of light. The hives are left open as in the Summer. The heat generated by the bees is sufficient to keep the air warm enough for their safety and comfort.

[Some thirty years ago a farmer of our acquaintance in western New-York, built a house very similar to the above, using lath and plaster inside, instead of the double walls. His bees had been prosperous previously, in straw hives set on rude stands, and protected on the back and above with boards. He moved his ninety hives into the new house, and for a short time they did well. But they soon began to rob each other; the moths got in, but they were carefully cleared out several times; the bees gradually died off from some undiscovered cause, and the third year only half a dozen swarms remained alive. These were put back into the old position, where they maintained their own for three years longer, when the whole died out. The high hopes of the farmer of success in bee-keeping were dashed to the ground. He made his bee-house an addition to his dwelling, and until his death always insisted that though fond of queens, bees were too democratic to thrive in a fine house.—ED. *Am. Agriculturist.*]

Experiments with Sorghum — Value of Gypsum.

Friend Harris, in a recent number of the Genesee Farmer, gives a detailed account of some experiments on Sorgium with various artificial manures, from which we condense the main points of interest. The soil, a sandy loam, had been under cultivation without manuring for some thirty years; the last three years it had lain in grass and clover. It was plowed and harrowed into mellow condition, and the sorghum planted June 4th, in hills about 3 feet 4 inches apart. Eleven plots, each containing one twentieth of an acre were experimented upon. The various manures were applied in the hill, being thoroughly worked into the soil, and then covered with fresh earth, on which the seed was planted.

The Sorghum was cut October 7 and 8, and the stalks accurately weighed in the field, with the following results:

No.	Manure used per acre.	No. of Hills.	Weight of Stalks.	Value of Crop per acre.
1	No manure	236	1,947	3,241
2	400 lbs. sulphate of ammonia	123	9,383	15,387
3	400 lbs. superphosphate of lime	184	21,211	23,059
4	400 lbs. superphosphate of lime and 400 lbs. sulphate of ammonia	143	15,097	21,333
5	250 lbs. plaster (sulphate of lime)	184	22,858	34,326
6	2000 lbs. unleached fiard wood ashes	162	15,058	16,120
7	3000 lbs. unleached ashes and 250 lbs. plaster (mixed together)	169	16,165	19,060
8	200 lbs. common salt	161	7,570	9,463
9	400 lbs. sulphate of ammonia, 400 lbs. superphosphate of lime and 2000 lbs. unleached ashes	112	10,528	18,790
10	400 lbs. superphosphate of lime and 2000 lbs. unleached ashes	176	21,269	17,920
11	No manure	171	3,136	3,662

Each plot contained 201 hills, but as the above table shows, many failed. The seed either rotted in the ground or was injured by the manure. The last column shows in the plainest manner the relative yield per acre, allowing the same number of hills to have produced on each plot.

The effect of plaster (gypsum or sulphate of lime) is interesting and instructive. Not only does the plot manured with this, show the greatest yield per hill, but with one exception (plot No. 3) the greatest number of hills germinated and grew. These two plots, No. 3 and 5, were superior to any others, all through the season.

The superphosphate used was a superior article, made from calcined bones expressly for the experiment. It should be understood that the best superphosphate contains at least 50 per cent. of plaster; so that if common plaster contains 80 per cent of sulphate of lime, the 250 lbs. applied to plot No. 5 would contain the same quantity of real plaster as the 400 lbs. of superphosphate applied to plot No. 3; if 90 per cent., it would get 25 lbs. more plaster than plot No. 3.

The plots receiving plaster and superphosphate are the two best of the series. Plot No. 5 is a little the best, and probably received a little more real plaster than plot No. 3. One thing is clear: *the soluble phosphate of lime in the superphosphate* did no good, for on the plot No. 5 we have plaster alone; and on the other plot (No. 3) we have plaster and *soluble phosphate;* and yet the crop is no better from the two together, than from the plaster alone.

In conclusion Mr. Harris frankly says he does not know why the manured plots should produce so much more than the unmanured. It could not be wholly owing to want of sulphate of lime in the soil, for salt, which contains none, more than doubled the crop, and ashes quadrupled the yield. He suggests that it may be due to the plaster accelerating the growth of the young plants, and enabling them to throw out roots and occupy the ground, and thus helping them to get all the food they required. This, however, it must be said, does not appear to fully solve the question, for it does not explain *how* or *why* it accelerates their growth—the great point involved, and desirable to know. Whatever may be the true theory, the experiment indicates that on soils similar to the above, plaster is of undoubted utility; practical men will therefore do well to test it for themselves.

Plowing under Green Rye for Manure.

W. F., of Mercer Co., N. J., has a poor opinion of green rye as a manure for poor soils. He has now a piece of poor land which he would like to improve by plowing under green crops, having no stable or yard manure, but says: "A few years ago I plowed under a good growth of rye in the Spring for corn, but failed to get more than half the yield in corn that I should have looked for without the green crop; the season was favorable for it, but it came up poorly, looked yellow, and grew very slowly, notwithstanding it was well attended. The same Spring another piece of rye was turned under (earlier) for oats. This also failed to give an expected crop. From my experience above given I have had my doubts as to the propriety of plowing under grain crops in quick succession; but as to clover being good, there is no doubt. I have been engaged in the farming business 15 years." [The experience of W. F. is quite different from that of many others, so far as rye is concerned. As a general rule any green crop, plowed under, produces good effects. Clover is undoubtedly one of the best green manures for soils already good enough to yield a growth of clover.—Ed. *American Agriculturist.*]

Bones Good for Manure.

As most of our readers doubtless know, we do not attach great value to mineral manures, as a general rule. That was a beautiful *theory*, at one time so strongly advocated by Liebig and others, viz: that the organic part of plants being composed of the same elements as air and water, the main object of the cultivator should be to supply the inorganic elements, such as are found in the ashes of plants. Hence the importance attached to chemical analyses, to ascertain what are the mineral constituents of the plants or of their ashes. However much may yet grow out of this theory, it is pretty certain that, so far, the application of it has resulted in little practical good.

But without stopping to discuss this matter, we may safely assert that, as a rule, organic materials, (animal and vegetable substances) do act beneficially as fertilizers, and that for the cereal or grain crops, those substances yielding the most nitrogen or ammonia, produce the best results. Animal substances, especially lean flesh and cartilages, abound in nitrogen, and hence these are among the best fertilizers. Bones are made up of cartilage and a mineral part, which is chiefly phosphate of lime with some carbonate of lime. The manure manufacturers claim that the phosphate is the most efficient and most valuable portion of the bones, and that therefore burned bones, or manures made from them, are of great value. We do not now and here discuss that question; nearly all admit that burned bones themselves are valueless, but that dissolving them in sulphuric acid sets the phosphoric acid free, in which state it becomes active. It may be queried whether the good results observed are due to the action of the phosphoric acid as direct food for the plants, or whether the freed phosphoric acid, together with the added sulphuric acid, may not act as absorbents of ammonia from the atmosphere, and in this way produce the same effect as ammoniacal organic manures. It is certain that phosphoric acid has a very ready affinity for ammonia, and on this account it may be a more powerful fertilizer than other acids.

But theories aside, the organic matter, the cartilagineous portion of bones, is a good fertilizer. Trials without number show that bones ground fine, and applied to the soil, stimulate plants to active growth. If ground fine, or dissolved in acid, they become quickly available. When merely crushed, they are a longer time in decomposing, and their full effect is not so soon obtained. For fruit trees and grape vines, where more permanent effects are desired, coarsely broken or whole bones are useful. They decay gradually, and yield a little nutriment from year to year. Unburned bones are far too valuable to be lost. A single bone lying on the surface of the ground where not needed, wastes its substance in the air. Put that one bone at the bottom of a fruit tree or vine, and it will gradually furnish all its valuable elements to increase the crop of fruit. Grind it to powder, or dissolve it in acid to a semi-fluid mass, and apply this to the garden, or to grain or grass, and it will be nearly all used up by the first crop, and show excellent results. We repeat, that bones are of too great value as a fertilizer to be wasted.

Salt in the Manure Heap.

One of the most economical articles about yards and stables is salt. It is just as good to feed to the manure heap as to pigs and cattle. It is best applied in a weak solution in water with a common watering pot. Whether salt does or does not supply direct plant food, it at least prevents the escape of ammonia, the most valuable part of the manure heap. This gas is always leaving animal manure, unless there is plenty of moisture present, or some agent to absorb it. Salt does this without arresting the decomposition of the mass. Sea shore farmers make a large use of sea-weed, without fully understanding the philosophy of its action. It is carted into the styes and barn yards several times in the course of the year, and intimately mixed by means of the plow with the droppings of cattle. Thus all the best parts of the manure are saved by the salt, and a large addition is made to its bulk by the vegetable matter of the sea weed. These weeds gathered from the shore are good manure by themselves, but are still more valuable when decomposed and saturated with manure drippings as they pass through the sty and yard on their way to the plowed field or meadow.

Cocoanut Waste in Gardens, etc.

The fiber of the outer husk of the cocoanut is extensively used in making mats, brushes, etc. In the process of manufacture, a large quantity of refuse is separated from the fiber. A recent number of the London Gardeners' Chronicle says that this substance is now being turned to great account in gardening. It is valuable as a mechanical agent for ameliorating stiff soils, makes an excellent mulching, and forms a good substitute for leaf mold in the finer kinds of compost for potting. Many other uses are named for this material in the garden and hot-house. Though few sources of supply exist in this country, these facts are worth noting by cultivators in the neighborhood of such factories

A SAMPLE PUMPKIN IN 1862.

Novel Exhibition at the Office of the American Agriculturist.

Great Display of Pumpkins, Squashes, Fancy Gourds, etc.

"*That's what we are coming to,*" said our humorous artist, as he threw upon our table the above picture which he had just sketched after examining the large pumpkins exhibited at the Office of the *American Agriculturist* in competition for the prizes offered. He has undoubtedly "stretched things" somewhat, as is his wont, but we believe that no exhibition of the kind ever excited more wonder than has been expressed by the crowd of visitors who have thronged our office during the exhibition. It was a complete success in every respect, in the number and variety of specimens shown, and in the mammoth size of several monsters of the pumpkin tribe.

Two long tables, covering an area of 150 square feet, were crowded with the golden globes, and above these were suspended nearly two hundred specimens of fancy gourds of every variety of form and color, the whole making a display probably never equalled in this country. The ten largest each weighed over one hundred pounds, their aggregate amounting to 1718 lbs., or an average of 171.8 lbs. each! It is a matter of no little gratification, that in this, as in many other friendly contests, we have beaten John Bull, and that too when he had all Europe to back him. Early in the year, the Royal Horticultural Society invited England and the rest of the world, to unite in a great International Show of Fruits, Vegetables, Cereals, and *Gourds*. It was generally understood that the last named productions, including every variety of melon, squash and pumpkin, were to be the chief feature of the exhibition, and we find that contributions from other countries than England were mostly confined to this line. The Show came off during the second week in October, and full reports are given in our foreign files. In variety and number of the gourd family, the exhibition was first class, but according to the figures, Jonathan ranks far ahead in size and productiveness. The heaviest pumpkin shown in London weighed 176 lbs., the second largest 154 lbs. These would look small beside our mammoth specimen, which stands 3 feet high, girts 8 feet 7 inches, and weighed when picked 289 lbs! Its weight has since been reduced by drying out. Four of our specimens each weigh over 200 lbs. So we can now put another feather in the cap of Yankee Doodle, and may claim the fastest yacht, the best reaper, the most effective gunboat, and the BIGGEST PUMPKIN! The cash prizes offered for competition at the *Agriculturist* Exhibition were as follows:

No. 1—For the *Heaviest* Pumpkin or Squash			$20.00
No. 2—For the 2nd	do.	do.	10.00
No. 3—For the 3d	do.	do.	5.00
No. 4—For the Best	do.	do. for cooking	10.00
No. 5—For the 2nd Best	do.	do. do.	5.00
No. 6—For the largest yield on a single Vine			10.00
No. 7—For the 2nd	do.	do.	5.00
No. 8—For the largest and finest collection of Fancy or Ornamental Gourds			10.00
No. 9—For the 2nd	do	do.	5.00

The Exhibition was opened according to previous announcement, on Wednesday Nov. 5th. The following is a list of the entries, in the order in which they were received:

No. 1.—Wm. D. Hall, Wallingford, Conn. Three pumpkins, for the heaviest. Weights 208, 221 and 270 lbs.

No. 2.—By the same, 42 pumpkins, growth of one vine, *the vine with them*; aggregate weight, 1250½ lbs.

No. 3.—J. W. Somarindyck, Lattingtown, L. I. Two pumpkins from one vine. Weights, 221½ and 165½ lbs.

No. 4.—W. R. Renwick, Saugerties, N. Y. One squash, 141½ lbs.

No. 5.—G. M. Van Ness, Pompton Plains, N. J. 6 African Squashes from one vine; 393 lbs. 4 single pumpkins, 67½, 70½, 87 and 85½ lbs., 1 Citron Melon, 37½ lbs.

No. 6.—Rev. Thos. McCauley, Huntington, N. Y. 2 Boston Marrow Squashes (hybrids), 92½ and 112¾ lbs. 1 Apple pie melon, 35¾ lbs.

No. 8.—A. B. Worthington, Middle Haddam, Conn. 1 Pumpkin, 116 lbs.

No. 9.—No name. 1 Pumpkin, 105 lbs.

No. 10.—Richard Wisner, Warwick, N. Y. 1 Pumpkin.

No. 11.—Jas. Devoe, Morrisania, N. Y. 1 Boston Marrow Squash (hybrid).

No. 12.—J. J. H. Gregory, Marblehead, Mass. For quality. Three Hubbard Squashes, Two Boston Marrow, One Turban, one new Hybrid.

No. 13.—N. C. Day, North Leominster, Mass. For quality. Two Hubbard Squashes, 19 and 20 lbs.

No. 14.—Wm. F. Heins, Woodstock, N. Y. Collection of Fancy Gourds, 75 varieties.

No. 15.—B. K. Bliss, Springfield, Mass, collection of Fancy Gourds, 73 varieties.

No. 16.—Master J. C. Williams, West Bloomfield, N. J. Hubbard Squash.

No. 17.—Bliss Coss jr., Branchville, N. J. 2 Hubbard Squashes.

No. 18.—J. B. Bryan, Brooklyn, N.Y. White Egg Gourds.

No. 19.—Henry W. Carey, N. Y. City. Mock Orange Gourds, very large.

No. 20.—John E. Kahns, Keyport, N. J. White Crooknecked Squash.

No. 21.—J. Van Riper, Lodi, N. J. 3 Crooknecked Squashes.

No. 22.—F. A. Leggett, N. Y. City. Boston Marrow Squash, Crooknecked Squash, Round Squash.

No. 23.—George A. Spaulding, So. Woodstock, Conn. One Cream Pumpkin, weight 163 lbs.

The Judges who were appointed by the Fruit Growers' Society, were the following gentlemen: W. S. Carpenter, Horace Greeley, J. Van Brunt, Judge Waterman and S. B. Conover. The pumpkins were carefully weighed under the direction of the Committee, upon platform scales from the well known manufactory of J. L. Brown, N. Y. City. The specimens submitted as "best in quality" were tested by stewing and in pies, cooked at the Home Dining Saloon, corner of William and John-sts., and in several private families.

The following are the awards:

1ST PRIZE: for *Heaviest Pumpkin*, 270½ lbs., (weight at Exhibition.) Wm. D. Hall, Wallingford, Conn., $20.

2ND PRIZE; for *Heavy Pumpkin*, 221½ lbs., to J. W. Somarindyck, Lattingtown, L. I., $10.

3D PRIZE: for *Heavy Pumpkin*, 221 lbs., to Wm. D. Hall, Wallingford, Conn., $5.

4TH PRIZE; for the best Pumpkin or Squash for *cooking*, to N. C. Day, North Leominster, Mass.; variety: Hubbard Squash—$10.

5TH PRIZE; for the second best for *cooking*, to G. M. Van Ness., Pompton Plains, N. J.; variety: "African" Squash—$5.

6TH PRIZE; for largest yield on a single vine, 42 pumpkins, weight 1,250½ lbs. to Wm. D. Hall, $10.

7TH PRIZE; for the second largest yield on a single vine, 429 lbs., to Wm. D. Hall, $5.

8TH PRIZE; for the largest and finest collection of Fancy and Ornamental Gourds—75 varieties, to Wm. F. Heins, Woodstock, N. Y., $10.

9TH PRIZE; for the second best collection of Fancy and Ornamental Gourds—73 varieties, to B. K. Bliss, Springfield, Mass., $5.

HONORABLE MENTION was made of the 4 handsome African Squashes from one vine, weighing 393 lbs., exhibited by G. M. Van Ness, Pompton Plains, N. J.

The object of the Exhibition was not merely to bring out a display which should gratify childish curiosity, but to call attention to the, utility of this production, particularly to exhibit its capacity of yield for stock-feeding purposes, and also to show what results may be obtained by high culture. The contributions of Mr. Hall, particularly, prove that pumpkin vines are not ungrateful for liberal treatment. The following is his account of how he obtained his great yield: The soil was a light sandy loam, that had been for many years a worn out pasture. It was well worked to the depth of *ten inches* and manured with a liberal application of fish guano, composted with soil. Only one vine was allowed to grow in a hill, and ample room was given for its extension. The largest pumpkin, weighing 289 lbs. when first picked, grew at the second set from the root, and was the only one allowed to remain on the vine. On another vine treated in the same manner, only three pumpkins were allowed to grow, which weighed respectively 193, 217 and 237 lbs. Another vine similarly cultivated, but with all the fruit allowed to remain, produced 42 pumpkins weighing when first gathered 1317 lbs. The vine with its laterals, which was sent to the exhibition with its product, measured 1621 feet in length.

It will be seen from the above that while large pumpkins may be easily grown, the practice is not economical. There was a loss of over 600 lbs. of fruit in confining the yield to three specimens on one vine, and over 1000 lbs., where only one was left. Besides this loss, the very

large fruit are worth little except for feeding to stock. It would require almost a regiment of men with good appetites to make way with the pies from one of these mammoths.

☞ Our artist has prepared a beautiful sketch of the finer varieties of fancy and ornamental gourds, which will be presented next month, with some account of that very pleasing department of the exhibition.

"Dakota Potato."

Maj. J. B. Hoffman, of the Ponca Indian Agency in Dakota Territory, proposes the above name for the *Apios tuberosa*, or ground nut, which he is trying to cultivate there. The specimens brought by Maj. H., to the *Agriculturist* Exhibition Tables are of the size of hens' eggs, though the seed planted were but little larger than peanuts. The Indians are fond of them, and it was with some difficulty he secured enough to plant in the Spring, so thoroughly had they been dug for food. They are not injured, but rather improved by leaving in the ground over Winter. The vine producing them is of delicate growth, 3 to 4 feet long and bears pretty clusters of purple flowers. Who knows but here is a plant superior to the far-fetched and very greatly lauded *Dioscorea batatas?* It is at least worthy of trial.

This plant attracted the attention of European savans many years ago. In 1840 Messrs. Eaton & Wright recommended it in their Botany, stating that it was a nutritious vegetable and ought to be enltivated. But our own countrymen seem to have almost entirely overlooked it. We hope Maj. Hoffman will carry out his intended experiments to test its adaptability to general culture as an esculent root, especially in the region where it flonrishes as an indigenous plant, and where the common potato does not grow well. His trial the present year indicates that enltivation has a marked effect upon the size and yield of the root. We will try the specimens presented, in this locality. One of them we boiled with potatoes, and found it required longer cooking. When done it was dry and mealy, somewhat resembling a roasted chestnut in flavor, and not so fine grained as the Dioscorea batatas, though firmer and better.

"Grinding up the Soil"—A Hint.

Any one who has observed and studied the effects of culture upon the soil and growing plants, well knows the great advantage of having the seed-bed pulverized very freely. Suppose for example, we eonld take up the entire surface of a field to a foot in depth and run it through a mill reducing it to a powder. Would not a soil thus prepared for the roots of corn, wheat or other grain, or for potatoes or turnips, be likely to start the seed more rapidly, and produce a far more luxuriant growth, than one merely stirred by the plow and harrow? But this grinding operation is just what is being done by nature dnring every Winter. Lay a lump of soil on a board, wet it, and let it freeze, and it will be found swelled and cracked in thousands of places, and when it thaws will fall into a mass of much finer particles than before the freezing. A second freezing will pulverize it still further, and by continuing the process a few times, the most compact hard-pan soil will be reduced to powder. An open Winter, one in which the soil is many times thawed and frozen, gives excellent preparation for good crops the following Summer, though such weather is bad for the growing of winter crops. The practical hint we would give, is, that cultivators should do what they can to facilitate the pulverization of the soil by freezing. As the ground ordinarily lies, in a compact state, the lower stratum is seldom reached by frost, though this is the portion most needing its effects. Hence the great advantage of plowing it up in Autumn or early Winter. Every acre that can now be stirred so as to let the frost penetrate lower down, will be better ground up. All the lower soil brought to the surface is there much more frequently expanded by alternate cold and heat. Spading or plowing up the garden, leaving it in ridges, is one of the most profitable things that can be done for it now.

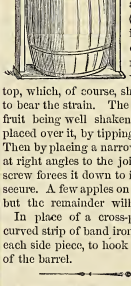
A Barometer Useful in Every Family.

A barometer, good enough for all ordinary purposes, can now be obtained for from $5 to $8. The interest on this sum, even at ten per cent., is only 50 to 80 cents a year. From our own experience and observation, we are certain that the barometer will save many times that amount, to a farmer, and indeed to every person whose business or pleasure depends at all upon being able to predict the state of the weather. It is said that "all signs fail in dry weather," but after several years of careful observation, we can not recall an instance in which our barometer has failed to give indication in advance of any material immediate change in the weather. No matter what the visible signs in the skies, or how threatening the clonds may appear, if our barometer index remains unmoved, we are always confident that neither rain nor wind will speedily disturb the present state of the weather. On the contrary, though the sun may shine ever so brightly and clear, and everything betoken serenity in the atmosphere, yet if the index hand of our Aneroid moves to the left, or if the mercury in our Woodruff commences to sink, we begin to "look out for squalls," and to prepare for them. If the movement be sudden and rapid, we look for an immediate smart shower, or at least a violent gust of wind, but of short duration. If the index-hand, or the mercury, fall very slowly, and continue to decline for a day or two, we are sure that there is an extensive disturbance of the atmosphere, with storms at a distance; that within a day or two these disturbances will reach our own locality; and that it will require several days at least for settled weather to again prevail. Take one example of many: On the morning of September 28, the barometer index began to recede, and thus continued until the evening of the 29th, when the index stopped falling and afterwards rose a little. Yet during both of these days the weather was unusually pleasant. Our barometer was pronounced a false prophet, but we bid the doubters wait a day longer. During the night of the 30th, a heavy rain commenced, and it has not ceased to rain up to this time of writing (noon Oct. 3d), nor will the weather be settled for some time yet. The slow, steady, long continued fall of the barometer is conclusive on this point. There are some exceptions to this rule, depending upon direction of the wind, etc., but these exceptions are readily learned by observation.——On the contrary, we have often known it to be cloudy and threatening, everything indicating a storm; yet the barometer showed no change and there was none in the weather. We are far more governed by the barometer in plans for out-door work, for traveling, etc., than by anything indicated in the clouds or winds. We say unhesitatingly that a barometer is one of the most useful implements on the farm, and in the household. As a guide to cutting, spreading, or gathering hay and grain, such an instrument will often pay for itself in a single day. Farmers who can afford to do so, will do well to secure one now, and study its use so as to be able to turn it to the best practical account during next season.

There are two kinds of barometers. One of these, Kendall's Aneroid, we described in full, in the August *Agriculturist*, 1860. It is neat, compact, readily carried, and every way reliable. See description in our premium list on another page (Premium No. 6). The Mercurial Barometer, having a column of mercury (quicksilver) in a glass tube, is preferred by many, and it is a desirable instrument, though not so well adapted to carrying and hard usage as the spring or Aneroid. Woodruff's patent "Weather Indicator," or Mercurial barometer, is the most convenient Mercurial barometer for transportation of any form we have seen. These cost $5, $8, and $12, according to style, addition of thermometer, etc.

Apparatus for Packing Apples.

In packing apples in barrels for market, they should be pressed together so that no amount of handling and jolting will cause them to move about in the barrel, otherwise they become bruised, and soon decay. Various contrivances for the purpose have been made, and several already published in the *American Agriculturist*.



This plan, which has been in use for some time in Washington Market in this city, is one of the most effective, if not the very best. It is nothing more than a frame of wood or iron, (1½ inch band,) the latter is preferable, large enough to admit a barrel, and having a screw working through the top, which, of course, should be strong enough to bear the strain. The barrel is first filled, the fruit being well shaken down, and the frame placed over it, by tipping it a little on one edge. Then by placing a narrow board across the head at right angles to the joints, a few turns of the screw forces it down to its place, and makes all secure. A few apples on the top will be bruised, but the remainder will be kept from injury.

In place of a cross-piece at the bottom, a curved strip of band iron may be screwed on to each side piece, to hook under the bottom edges of the barrel.

A Novel Mode of Growing Asparagus.

A neighbor of ours has tried the following method for several years, and finds it successful: Laying off his beds four and-a-half feet wide, and sixteen feet long, he spreads on the surface a coat of sand two inches thick, and spades it under. (His soil is a stiff clay.) Then he lays upon this six solid inches by careful measure, of half-rotted dung. After this has settled a week, he spreads over it four inches of good garden soil; and in this he sets out one year old plants, twelve inches apart from crown to crown. The roots soon find their way into the rich provender below, in which they luxuriate, as the large, succulent shoots soon show.

For the American Agriculturist.

A Talk About Troublesome Weeds.

At a late meeting of our Farmers' Club, the subject for discussion, was "*Stoloniferous Plants.*" The gentleman who presented it was a little mistaken as to the exact meaning of the words used. According to Gray and other botanists, a Stolon is "a trailing or reclining branch above ground, which strikes root where it touches the soil, etc.," of which the currant and gooseberry are familiar examples. But in the discussion referred to, it was used in a more general sense, to include all plants (weeds, especially,) which increase by creeping roots, such as Canada thistles, quack grass, and the like.

Speaker No. 1, observed that it was a lamentable fact that the pests of the farm and garden were rapidly increasing. Insects of many kinds swarm upon our trees and vines. Ants are increasingly troublesome, eating up young plants, burrowing in the finest lawns, in the footpaths of the garden, and throwing up unsightly heaps among the choicest flower-borders. In our fields, weeds are spreading in a formidable manner. The white daisy makes many a field as white in June as in Winter; and the mustard-plant makes others yellow as sulphur. The Canada thistle is running unbridled from farm to farm, and quack grass is hard after it.

What shall we do? These weeds exhaust the soil, and they make tillage very laborious. They can be subdued, if we only set about it with a will. Much has been said about cutting down thistles and alders and dock, in a certain month, on a certain day of the month and period of the moon's changes. Little reliance can be put on such rules. If rank-growing plants are cut down when at their full strength, and if the cutting is followed up by a heavy application of salt, either the brine, or the close browsing of cattle in search of the salt, may weaken, and at length kill out the plants; but such results will be the exception, not the general rule. *Grubbing up the roots*, is the only sure remedy.

Speaker No. 2. In my view, the increase of insects is owing mainly to the cutting down of our forests and the killing of the birds. Had we more forest trees about us, multitudes of insects would find homes there, instead of in our orchards and gardens. And if we encouraged the birds to dwell about us more securely, they would help keep down the insects. As to killing out Canada thistles by cutting off the tops, I don't believe a word in it. I have more faith in the old saw that, to make sure work of it, they should be dug up, the roots dried in an oven, smoked in a pipe, and the ashes carefully saved! This plant increases chiefly by an under-ground root. It sends down a perpendicular root, say a foot or eighteen inches long, which then turns off at a right angle, and runs some distance horizontally. From this horizontal root (which is the only *true* root,) there spring up new plants at every few inches. Now, the only sure way to kill the thistle, is to dig up this horizontal root. To cut off the leaves, or to pull up the perpendicular shoot, does not answer the purpose.

No. 3 said, jocosely, that if this thistle has spread into the States from Canada, it is plain that it has strong Southern leanings.

No. 4. In my experience, this plant and quack grass can be kept in check, if not wholly exterminated. The grass is a tough customer, indeed. I once dug up a lot of the roots, laid them on an old stick of timber to dry, but in a few weeks, found that they had penetrated the spongy wood, and looked far from being discouraged! When a field has become infested with these weeds or daisies, my plan is to put it under the plow and harrow. In the Spring, before planting, I plow and harrow twice, gather up the roots of thistle and quack, and burn them. Then I put in some hoed crop, keep the cultivator and hoe moving briskly until the crop completely shades the ground: after this, the weeds will not grow much. After the crop is harvested, I go over the field again, with plow and harrow and rake. The horse-rake answers well to gather the roots into heaps. The year after this, and indeed for several years, the weeds in that field give me but little trouble.

No. 5. I agree with the last speaker, but would add that wherever these pests or others of the family appear, they must never be allowed to go to seed. The scythe should go over the fields and along the roadsides at least twice every Summer. Nor will it suffice for one or two farmers to do this. All should do it, or the careful will suffer from the flying seeds of the careless. I am not so sure that thistles can not be subdued (say in the garden,) by perseveringly cutting off the tops, if they are cut off with the hoe or spade just below the surface of the ground. Like every other plant, they will die if they can't breathe; and their leaves are their lungs. [I have succeeded pretty well in fighting couch-grass in a stiff clay soil, by using a double Michigan plow, and turning under the roots so deep as to smother them. And when the roots rot, they make a capital manure. A neighbor of mine smothers his quack, and plows up his thistles once a month, giving them no rest above ground or beneath it, and they die out from sheer exhaustion.] *

Tim Bunker on Running Astern.

"A great crop of corn this," said Patrick, as he threw the tenth red ear over the heap of stalks from which he was husking.

"Taint nothing to what I've seen over on the Island when I used to live there," said uncle Jotham Sparrowgrass, with a look that would have annihilated anybody but an Irishman.

"An how much d'ye think ye've seen over there, old fellow?" asked Pat., determined to sift matters to the bottom.

"Eighty bushels to the acre of clean shell corn, and nothing used but fish manure neither."

"An sure that was some corn, but the Squire will have a hundred as sure as ye'r born. That is the tenth red ear, and we have not been husking an hour yet, and every red ear marks ten bushels, they say."

"Red ears! you fool!" exclaimed uncle Jotham, the corn is more than quarter red ears. There won't be seventy bushels to the acre on any part of the Squire's farm I know."

"You must go over to neighbor Frink's to see corn," remarked Seth Twiggs, drily, as he sat on his milking stool at the end of the heap, puffing away with his pipe, while his hands were busy with the ears.

"Now Jake, own up," said Tucker, "and tell us whether the crop on that lot was ten bushels and three pecks, or three bushels and ten pecks."

"It was plump twenty bushels, and no thanks to you either," said Jake indignantly. "It is enuff to make any man go astarn to have such a hand to work for him as you are. The weeds grew faster than the corn, a mighty sight."

These remarks were made at a husking bee on my barn floor a few evenings back. I approve of huskings if they are rightly managed, though they probably do more to promote good neighborhood than they do to help on the farmer's work. They make a pleasant gathering of old friends and neighbors, and sometimes relieve a man in a pinch. The scene was a good deal like that in Whittier's song of the huskers:

> "Swung o'er the heaped-up harvest
> From pitchforks in the mow,
> Shone dimly down the lanterns
> On the pleasant scene below;
> The growing pile of husks behind
> The golden ears before,
> And laughing eyes and busy hands,
> And brown cheeks glimmering o'er.
>
> Half hidden in a quiet nook,
> Serene of look and heart,
> Talking their old times over,
> The old men sat apart;
> While up and down the unhusked pile,
> Or nestling in its shade,
> At hide-and-seek with laugh and shout,
> The happy children played."

You see Whittier is an old fellow down in Massachusetts, that writes songs, and once in a while he touches up the farmers as well as the negroes. I suppose it is because he thinks they are both rather sad eases, and need sympathy. Mrs. Bunker says he is the best ballad maker in America, and I believe our Sally is pretty much the same way of thinking. At any rate, I guess he has been to a husking, and knows pretty near how they go on. The old folks that evening had the barn floor pretty much to themselves, the young ones preferring out-of-doors, where they had a plenty of moonshine in the heavens, and I guess some below.

Jake Frink's corn field of course came up for discussion. For I never saw men at a husking but they wanted one more *butt*, than they found in the corn heap. It was certainly the poorest piece of corn in the neighborhood, and if there is any poorer in town, I have not seen it. It wasn't so much because the land was poor naturally, for his farm joins mine, and there can't be a great deal of original difference in the soil. His corn field and mine were not a quarter of a mile apart, but there was a good deal more than that difference in the yield. Tucker probably made an under-statement in putting it at ten bushels and a fraction, but there could not have been over twenty bushels, and one third of that was soft corn. It was hoed only once, and the crop of wild mustard and wormwood was very generous. Grass was so plenty that Jake's cows found the best pasture upon the corn field.

"What is gwine to be the price of mustard this Fall naber Frink?" inquired Seth Twiggs.

"I don't care," said Jake, "I shant have any to sell. It makes tol'able fodder."

"You'll make beef on't I suppose," remarked Tucker very gravely.

"How much profit d'ye spose ye've made on that crop," inquired uncle Jotham.

"Profit!" exclaimed Jake. "I don't farm for profit. I'm thankful enuff if I can get a livin'. I've allers had a hard time on't, and this year have run astarn a little more than common."

"And where do you 'spose the leak is, in your pocket?" I inquired. "Wall neow I can't tell," said Jake scratching his head. It seems as if the trouble was at the top of the pocket instead of the bottom, and I've been allers siferin' to find out why money didn't git into my pocket. Mine allers gits out afore it gits in, so that the most of the time I don't have nothin'. I've allers been runnin' astarn since I begun to farm it, and I don't know what the matter is."

Jake's puzzle is that of a good many others, though few, it is to be hoped, are quite so bad off as he is. They do not make any headway, but are rather getting in debt every year. Many

have to sell out and change their business, or emigrate to the west, where the land has not been so long abused as it has in the older States. There is some thing in Jake's insinuation that bad help is the cause of bad crops. This is apt to be the case where the employer is not in the field himself with his hands for a large part of the time. I have never yet seen a farm that would thrive without the constant oversight of the owner. Farming necessarily confines a man at home as closely as any other business. There are occasions of loss every day in seed time and harvest, if he is away from home. But Jake's trouble is not here, for he does not hire much help of any kind, and what he does hire is a fair average of farm help.

One thing that makes him run astern is the want of all system in making manure. He does not feel that this is an essential part of a farmer's business. He does not make one load where he has the material to make ten. An empty barn-yard makes a barren corn field. This makes a man discouraged, and he does nothing promptly and with a will. He runs astern in every crop through the season, and in his pecuniary affairs at the end of the year.

But this is not all the trouble with my neighbor. Jake is not what he ought to be morally, and this perhaps lies at the bottom of his poor farming, as is the case with a multitude of others. It takes something more than a strong body and a sound mind to make a successful tiller of the soil. Manhood is as much an element of prosperity in this as in any other calling. If a man goes to the village and haunts taverns, nothing will save his business from disaster. He will make foolish bargains, sell what he ought to keep, and buy what he does not want. If he is tricky in his business dealings, he will soon lose the confidence of his fellow men, and the market for his produce. Temperance and integrity are about the best stock a man can keep on the farm, and with these, I have rarely known a farmer to run astern.

Hookertown, Nov. 15th, 1862. Yours to command, TIMOTHY BUNKER, Esq.

Notes from Colorado.

Mr. E. K. Woodbury sends the following items to the *American Agriculturist*: The place from which I write (La Porte), lies at the foot of the Rocky Mountains, in about latitude 40° 30', where a small, clear, rapid stream called *Cache la Poudre creek* issues from the mountains. At this point the Cherokee trail, to which the overland mail route has recently been changed from the South Pass, leaves the plains for scenery as famous for variety as is that of the plains for monotony.

But little of the land in this region is adapted to agriculture, and this requires irrigation, for which the rapid current of the streams furnish excellent facilities. Still we begin to produce fair crops of cereals, while all sorts of root and vine crops thrive most luxuriantly. What *tame* fruit will do we can not yet tell, but we have delicious wild strawberries, raspberries and gooseberries, currants, plums and cherries, and two kinds of cactus that yield palatable fruit as well as beautiful flowers. We are not backward in efforts to supply ourselves with apples, peaches, and grapes, and in regard to the first and last, we feel quite confident of success, less so in regard to apples, though all three (planted and set out this Spring) look promising. There is one item on which we shall eclipse you utterly. A Yankee or a Kentucky grazier who should look at his beautiful pastures, every inch covered with luxuriant verdure, would laugh at our sandy plains, not half covered with grass, and the little there is, so short as hardly to give a hold to bite it by; but he would be wrong after all. Within five years, unless the home demand uses all our beef, Colorado will sell cattle in Gotham. From this stream, and I don't know how much further north, down to, or rather up (South) to the Arkansas, the foot-hills of these Rocky Mountains and the adjacent plains, probably furnish the best pasturage on the Continent. Even in this latitude cattle do not require feeding more than three *weeks* during the year, and a majority of the cattle and ponies that are not worked, do not get a bite of hay or grain during the year. E. K. WOODBURY.

Agriculture of the Aborigines.

Little can be said of it, for it did not amount to much. Their principal crop was corn, called by them *menchin*. It was of several sorts, red, white, yellow, blue, black, speckled, etc., though the white and yellow were the most common. At the far north, they had a kind that they called *mohaust's* corn, which, though planted in June, ripened before frost. When the natives had occupied a piece of ground for several years, they manured it, using at planting, three fishes to the hill. The favorite fish for this purpose was a kind called *aloofes*. The early white inhabitants of New-England followed the example, and found it to their benefit.

After the whites came to this country, the Indians (the Indian *women*, be it known,) began to plant pumpkins, squashes, beans and turnips. Not very wisely, they used the hills of corn for bean-poles. Of the dried cornstalks, they made fodder in Winter: they also wove the husks into mats and baskets. Pop-corn was a favorite dish with them; the popping being done in hot ashes. Some of the corn thus roasted was eaten as Yankees eat it; much of it was pounded fine in stone mortars, and then made into pudding or bread. They also raised "sweet corn," which they ate as we do; they likewise boiled and dried and stored away a good deal in bags for Winter use. They, however, depended very much on the husbandry of their bows, traps, and fishing-rods.

Keep away from New-York.

A young man writes to the *American Agriculturist*, from Bergen Co., N. J., as follows: "I have a few hundred dollars with which I am thinking of starting some business in New-York City. A friend advises me to stay on my father's farm, and go into the business of raising poultry for market; which do you advise?" Similar inquiries are addressed to the Editor, almost weekly, from all parts of the Union. To all such we give the general answer: By all means keep away from this or any large city. Better raise poultry, pigs, pears, or any other produce, that would afford even a moderate income, than swell the number of anxious, careworn, and in most cases disappointed men who are struggling against the tide of competition which makes success in a large city the rare exception. Not more than one out of every hundred engaged in business here, grows rich; while at least eighty die poor. A larger number grow rich by farming, and not twenty, probably not ten, per cent. of those engaged in agricultural pursuits are ever reduced to poverty. This is the money view of the case. Moral statistics would show a yet more fearful risk to be encountered by changing a country for a city residence. We consider the chances of "doing better" by removal to the city about equal to the chances of safety in springing upon a locomotive in full motion: one man in a thousand may do it unharmed and be carried swiftly to the end of the route; the multitude would be quickly crushed. Sane men would choose the safer way of jogging over the ordinary highway with a steady team, or on foot.

Rustic Work, in Fine Country Seats.

Every one knows that it is very pleasant to meet with rustic arbors, seats and grottos in the retired parts of fine country places. Has any one ever stopped to consider *why* we enjoy such scenes? A traveler, in his description of the elegant grounds of Woburn Abbey, hits very near it. He says: "There are a number of ornamental cottages scattered around the margin of Woburn Park, of much exterior taste, and adorned by rustic work of various kinds. In some of them is an apartment for the reception of small parties from the Abbey, who wish to amuse themselves by allusions to primitive simplicity; for it is one of the enjoyments of those who are habituated to live in a style of high art and refinement, to take occasional refuge in the *contrast produced by comparative artlessness and simplicity*." That is it—the love of contrast.

Farmers Produce Wealth.

We are not disposed to underrate the importance of other callings, but in the actual production of commodities, the farmer confessedly ranks highest. He comes the nearest to being a creator of wealth.

Compare, for a moment, the nature and results of other pursuits with those of the husbandman. Take the manufacturer. He does but change the form of materials already produced to his hand. He adds, indeed, to their utility, or beauty or convenience, and in so doing is a public benefactor, but he is less a creator of values than the farmer. The miner does but bring up the crude ores already lying in the bowels of the earth; he does not create iron, lead, gold and silver. Yet let him receive his just reward. The man of commerce produces nothing, adds nothing to the world's wealth that did not exist before. He is simply a medium for the exchange of commodities. The commerce may be between individuals or nations, yet the result is the same; it is only a barter of equivalents—an exchange of six for half a dozen.

Something more than this can be affirmed of agriculture. It positively adds something to the stock of commodities. The crops gathered from a thousand hills were not here last Spring; the nation is positively richer by so much. Or rather, what remains over, after the cost of production is taken out, is so much added to the common stock of wealth. Yet, let not the farmer put on any unseemly airs. He could accomplish little without the aid and sympathy of other callings, and his products would be of little value without them. The eye can not say to the hand, I have no need of thee. Each fraternity of laborers is the friend and patron of the other; their interests are common. Let them hold each other in high esteem.

People usually consider two hands enough for all purposes, but we recently saw a man on Nassau street, who had *got a little behind hand*.

PROFITABLE WORK FOR WINTER.

Gather a Supply of Fuel Early.

The above scene will be realized on thousands of well regulated farms, at the first fall of snow sufficient for good sledding. The early gathering of a supply of fuel for the year has so many advantages, that to neglect it indicates bad management. If left until late in the Winter, much fuel that might be turned to good account may be buried under the snow, and accumulating drifts often make the woods almost inaccessible, or greatly increase the labor of collecting and hauling. By having a large supply of fuel at the door early in the season, profitable work is provided for many stormy days, in cutting and piling it under cover, which might otherwise be unemployed or wasted at the store or tavern. One of the secrets of successful farming is to so arrange the work that no hour need be without its task; another is that no operation shall be allowed to encroach on the time needed for something else. Both these points are gained by preparing the year's firewood early in the season. As we stated in the *Agriculturist* Calendar for November, it takes the heat of almost one half of green or soggy wood to burn the other half. Water, in changing to vapor, absorbs and conceals a thousand degrees of heat. A cord of charcoal gives out more heat in burning, than a cord of wood. A cord of thoroughly dried wood loses a thousand times less heat in the smoky vapor, than if burned when green. Therefore, get the Winter's fuel to drying out, under cover, as soon as possible. It will save fuel, time, vexation, and health, and be of great benefit to the housewife.

In most of the settled sections of our country, forests have been so reduced in extent, that it is an object to preserve and encourage their growth. In many places it is a question worthy of consideration whether it will not be more profitable to substitute coal for wood, and allow the forests to grow. Young trees increase rapidly in size, without any care, and the year's growth on an acre will usually pay a large percentage. At any rate, a little management will aid in economizing the limited supply. By cutting out only full grown trees, or those partially decayed, and thus making room for those of thrifty growth, the year's fuel may often be subtracted with positive advantage to the forest.

The Arboretum at Chatsworth.

A contributor to the *American Agriculturist* writes: Few readers need be told that an arboretum is a collection, into one place, of a large number of trees of different orders, species, and varieties, and arranged, more or less, in a scientific manner. They may indeed be distributed on principles of taste, rather than of obvious science. This has been undertaken in several small collections in this country, as likewise in the fine arboretum at Chiswick, England. And this plan is one that we should like to see followed in planting the grounds of our Colleges, and other large institutions. If no duplicates of either trees or shrubs are employed, a large variety can be got into a few acres. We have been shown a plan for embellishing a private country-place, of only about an acre in extent, drawn up by a scientific landscape gardener, in which upwards of one hundred species of trees and shrubs were noted down for planting. Such a mode of adorning a country home, must give it a peculiar interest.

But for large grounds, as from five to twenty acres, the first-named plan is doubtless best: certainly, it is the most scientific. And if the work is well done, it can be made to furnish at once an arboretum and a delightful pleasure ground. The famous arboretum at Chatsworth, England, is of this sort. It embraces, we believe, some forty or more acres, and contains upwards of two thousand species and varieties of trees. The trees, shrubs and plants are set along the margin or within near view of a carriage road which winds through the premises. They are all set far enough asunder to allow of their full development, and to admit of the subsequent introduction of other newly discovered species or varieties. They are classified in families; and it is very interesting to study out the relationship, where the external resemblance is often very slight. The road which rambles through so many trees is about a mile long. The name of every tree and plant is marked on a wooden label, and the letters are so large and distinctly painted, as to be read at ten yards' distance. Each tree is marked with its scientific name, its common English name, its native country, the year of its introduction, and the light which it attains at maturity.

All these trees and shrubs, it should be remembered, are those only which are hardy in Great Britain; of course, then, many interesting species have to be left out. It is an interesting fact that this vast collection of rare vegetation has not cost the owner of the property, the Duke of Devonshire, a sixpence. The ground has been prepared, the trees bought, and all other expenses paid from the proceeds of the timber trees with which the domain was originally covered, and which were removed and sold only just as fast as the room was wanted for planting. This fact indicates either that this timber was of remarkable quality, or that the price of timber is vastly higher around Chatsworth than any where in our own country.

As this public ground is centrally situated, and is generously thrown open to all visitors, its influence must be salutary and wide-spread.

Many a person receives here the first germs of a taste for rural pursuits. Many a person is surprised to learn of the wide variety of trees and plants which have been brought into cultivation. It is said that the day seldom passes when botanists, or amateurs, or nurserymen may not be seen here, examining the trees and making notes in their memorandum-books, for use elsewhere. As Mr. Downing said, when visiting it, in 1850, "The most perfect novice in trees can thus, by walking round the arboretum, obtain in a short time much knowledge of the hardy Sylva; while the arboriculturist can solve many a knotty point, by looking at the trees and plants, which no amount of study, without the living specimen, would settle."

We are happy to know that some of our leading nurserymen, in this country, are establishing arboretums of considerable extent, where the purchaser can see trees and shrubs in their maturity and perfection. And some of our literary institutions and country-residences are being embellished in the same way. A good idea.

For the American Agriculturist.

Secure the Best Varieties of Apples.

Farmers and orchardists who have more apple trees than is necessary to supply their families with an abundance the year round, will do well to change the varieties of the surplus trees by grafting, to Sweet Bough, Golden Sweet, Jersey Sweet and Tallman Sweet for stock, and to none but the very best long keeping varieties for market. When there is an abundant crop as at present, the Fall and early Winter market is seldom remunerative, but long keepers like the Northern Spy, Esopus Spitzenberg, Roxbury Russet and Baldwin, will always pay if properly managed and kept for late Spring market, especially the Spy and Russet. The Northern Spy is a large, handsome, showy apple, of good quality, a very long keeper, and retains its freshness longer and commands a higher price than any other apple of its season. It is not generally known and appreciated, or it would be more generally cultivated both for family use and market. Some parties have charged it with being a shy bearer, but this is an error, and results from the fact that being a thrifty, vigorous grower while young, it does not come into full bearing as early as some varieties which are moderate or slow growers while young. Any man who plants an orchard of this variety and trains (prunes) and cultivates according to its peculiar habits, can make no better investment, and neither himself nor his posterity will ever regret this choice. It is a sound, healthy, long lived tree, uniform in size and form, and the handsomest tree grown.

On account of its rigid, compact and uniformly upright habits it may be planted 25 feet apart where those of larger growth and spreading habits, like the Swaar, Baldwin and Fall Pippin, planted on the same soil, would require at least 30 feet distance apart. Furthermore, the Spy should be grown in the nursery with very low heads, commencing with two to four branches not more than 2½ feet from the ground, and those branches cut back to one foot, and the branches of the next season's growth to 12 or 15 inches, and so on, keeping the center open to form as broad a head as possible. This mode of training will improve the natural upright form of the head and also hasten its bearing.

Another fact which highly recommends the Spy is, that it blossoms two weeks later than others, which would often save the fruit from destruction by late frosts like that of the Spring of 1859, and this peculiarity makes this adapted to northern localities where Spring frosts are late and severe, as in a portion of New-England, Canada, St. Johns, and New-Brunswick. POMOLOGIST.

Business Hints to Nurserymen.

Let us say that, in what follows, we are not soliciting advertisements for this or any other journal. *We* can not afford to do much advertising: paper is too costly; postage would be doubled if we added a single page more; and, as a rule, a page of good reading matter set before at least two hundred thousand readers (not all subscribers, of course,) in the end pays better than even our high prices for advertisements.*

First then, we say, that large advertising, judiciously done, by good reliable nurserymen, is a paying operation. It costs little more to provide and sell $13,000 worth of trees and plants than it does for $10,000 worth in a year. The same organized force of men, the same machinery, etc., is required in one case as in the other. As with newspapers, so with nurseries, the cost of offices, making out catalogues, and keeping up a working force, is almost as heavy for a small business well done, as for a large one, and the largest profits are on the last sales. A few hundred dollars in advertising will pretty surely bring the increased trade.

Second. In making out catalogues, advertisements, hand-bills, etc., it is best to be explicit. Tell just what is for sale, the kind and character of trees and plants, the price of each; what is to be charged for packing—in short, answer just such questions as are likely to be asked in a personal conversation. A man is much more likely to buy, and to want to buy a thing, if he knows just what and how he can buy, than if the particulars are left in uncertainty, and he is in doubt about the "extras."

Third. The best season for advertising most largely is, we think, in Winter. People then have time to read, to plan, and select what they desire. A man will be much more likely to decide upon setting out an orchard, or ornamental trees, while he has leisure to look over the subject, and calculate the advantages, than when spring work is beginning to drive him up. Ten to one he will then put off tree-planting to a more convenient season. Suppose that all the trees to be purchased next Spring were selected and ordered in January and February, with all the preliminary correspondence completed before April. The purchasers would then be on the look out for manure, for the preparation of the ground, and be much more likely to make the trees live and thrive—to the credit of the seller. On the other hand, the nurseryman would have his plans all laid, and be able to have the trees taken up at the right time, packed in good order, and not hurriedly and imperfectly; his work would be done more profitably and more satisfactorily all round. As it now is, late in the Spring the nurseryman advertises, people get up a furore for trees, their orders are rushed in, the sellers run short on particular sorts, and have not time to correspond with those ordering; the arrival of large orders at once creates confusion and hurry; trees are hurriedly packed and sent off; the buyers plant them hurriedly without due care, and the results are—well known. We esteem the honest, intelligent nurseryman, who sets forth an attractive display of really good trees, and induces people to buy them, as a benefactor to the country, for there are not a tithe of the fruit and ornamental trees in the country that there ought to be, for the profit and pleasure of the people at large. The past season was an exception; the product of fruit was greater than ever before, and greater by far than we can expect as a rule; yet, except in a few favored localities, not half of the people have been supplied with an abundance of good fruit during the present year.

One hint more. Nurserymen are generally too ambitious to get large catalogues, embracing the greatest possible variety of every kind of fruit. They must offer two or three hundred varieties of apples and pears, and a proportionally large variety of other fruits. It is all very well for two or three great central establishments to have and offer about every thing grown; but there are in reality only a few kinds of the different fruits that are worth buying. If we were about starting a nursery in any locality, looking to our own profit, and the interests of our customers as well, we would carefully ascertain what were a *few* of the *best* apples, pears, peaches, plums, etc., for the localities where we looked for trade, and push these into the market. To induce a man to purchase an assortment of thirty or forty kinds of apples, for example, might tickle his fancy, and our own pocket, but it would neither be to his benefit, nor to our lasting credit.

Finally, no man should touch the nursery business, unless he have experience and observation among trees; nor unless he intend to make it a permanent business, so that he will feel it to be his *interest* to acquire and sustain a credit for strict honesty. The meanest of all cheating is that in which a man palms off a poor or untrue fruit tree for the sake of a shilling profit, involving the buyer in loss of purchase money, loss of time and care, and loss of interest, when after half a dozen or a dozen years of expectation, he finds that he has been the victim of deception.

* We say high prices, because some think our charges high, though in reality $1.50 a line would be cheaper than 10 cents a line in the average of journals of a similar class. The true method of estimating advertisements is: *first*, the price per line for each 100 or 1000 readers reached; *second*, the character of the readers; *third*, the smallness of the pages and their moderate limit and number, and the consequent likelihood of any advertisement being seen; and *fourth*, the select character of the advertisements. On these points we leave the *Agriculturist* advertising pages to speak for themselves, with the single remark that we reject a far larger number of advertisements than we admit.

A Common Mistake in Planting.

One of the greatest and commonest errors in tree-planting, is that of setting out large trees and many of them, in small inclosures. The rural improver thinks that he wants a great variety of trees, such as he has seen on Mr. Smith's place, and at Judge Jones' great establishment. So he adds tree to tree, year after year. While they are small, they look pretty, and all goes on well. But ere long, they spread out their limbs on every side, until they meet and overlap each other, making a complete forest jungle. None of them can become well-formed trees; they grow up spindling, or lop-sided, and give little real satisfaction. And besides, what can be expected of the grass under such overhanging boughs and such a mass of tree-roots? And what of shrubs and plants? Where, too, are the views of the street, or of the surrounding country? Everyway, the practice is a bad one.

Here let a remedy be suggested: Set out but few trees. Plant the largest along the bounda-

ries, and the smaller around the dwelling. Set them so as to preserve views of the neighborhood, at the best out-looks. Calculate for their growth many years ahead, and plant accordingly. Many persons plant a large number of trees in their grounds, intending, at some future day, when the trees become crowded, to thin them out. But very few persons have resolution enough to cut down a tree which has become large and thrifty, especially if it was planted by themselves. Multitudes of persons annually impose on themselves, and multitudes of places are annually ruined in this way.

It is safer, perhaps, for amateurs who make trees their habitual study, to have a large variety of trees, and of all sizes. They will take care of them; and when one interferes with the healthy growth of another, it will be removed. But for most persons, the better way is to select a few hardy, free-growing trees, set them at wide distances apart—say at least thirty to forty feet—and let them grow at their leisure. The effect will be good, and increasingly pleasant for a life-time.

Trees Against Flowers.—A Debate.

(Overheard and Reported for the American Agriculturist.)

John—Well, Mary, what do you think of flowers, this cold day? I reckon your posy-beds are done with for this season.

Mary—No, indeed. I have a fine collection of them here on the plant-stand. Flowers are not confined to the Summer season. See! I have chrysanthemums, geraniums, fuchsias, heliotropes, petunias, etc., making this southern window all a-glow.

John—Yes, that's better than nothing. But look out of doors. Where are the ten thousand summer flowers which filled the garden, and bloomed on hill and dale? All dead, or frozen stiff and buried up with snow. But my favorites, the trees, are still alive and doing well. The deciduous trees have cast their leaves, but their limbs and feathery spray are still beautiful; and the evergreens have undying charms.

Mary—I can't bear to hear you disparage my pets. Think how early in the season the spring flowers appear. The crocus, and snow-drop, and violet, hardly wait for the snow to melt. Go out even now, and brush off the snow, and you'll find the Christmas rose in bloom. Flowers begin early to blossom, and they persevere in doing so until Winter returns.

John—But, dear lady, only think of the trouble they make for mankind. One has to dig and manure, and rake and weed, sow seeds and save seeds, thin out and transplant, prune and tie up, and water, and protect from sun and frost, and so on—an everlasting botheration. Now, when I set out an apple tree or an elm tree, and get it once established in good soil, there's an end of all trouble. I can now stand or sit and look at my beauty, and enjoy it. All I have to do henceforth, is to clip a stray limb here and there, and it will go on, year after year, and build itself up—a splendid piece of architecture.

Mary—Good! sir, you *are* eloquent. But think what a *variety* of beautiful things we have in flowers—variety in color, shade and tint, form and fragrance. And then, what endless combinations we can make of these, both in the garden and in bouquets. How many pleasing associations florists have, poetical and historical. These touch the heart, and weave about our finer sentiments in a way that trees can not.

John—And *you* are eloquent. But hear one word more, before I submit to your superior arguments. You go into ecstasy, every Spring, over your beds of hyacinths and tulips; but remember, that in a very few weeks, these beds become a sightless mass of dry, withered stalks. A maple, or pear tree, or magnolia, blossoms, but the flowers are succeeded by a harvest of bright-colored and useful fruit, and by clustering boughs of fresh, green foliage. Bear in mind this fact, also: when you set out a dahlia, verbena, or other flowering plant, in the Spring, it attains its perfection in a single season, and that's the upshot of it. It dies down when the first frost comes, and each succeeding Spring you have to begin where you did the Spring before. You make no progress from year to year, and would gain nothing more at the end of a lifetime. But in setting out a tree, you plant something which is a pleasant object from the very first, and which develops itself more and more every year; it is something larger and grander, every season, and will continue to make progress for one's whole lifetime.

Mary—My dear friend, there's something to be said on both sides. Trees give us refreshing shade; they suggest ideas of repose and comfort.

John—They give us fire-wood and lumber, and ship-masts, wagon-hubs and ox-yokes.

Mary—Yes, you practical man. The oaks of Mamre, the cedars of Lebanon, "the pine-tree, and fir-tree, and box-tree, together," have sacred associations, as well as the rose of Sharon and lily of the valley. I think we had better shake hands, and agree that flowers and trees are both good things in their way, and were made for man's use and enjoyment.

[Our reporter goes on to tell how John and Mary compromised, and agreed that each was right in his and her tastes; and how John fell to praising the rose bloom on Mary's lips, and—but the reader may guess the rest. They are likely to have both trees and flowers, and enjoy them *together*.—*Ed. American Agriculturist.*]

For the American Agriculturist.

More Standard Fruit Wanted.

As the season for selecting sions for propagation is at hand, I would suggest to nurserymen the importance of materially reducing their long lists of varieties, and propagating none but the best. It costs no more and is as easy and convenient to grow them, as inferior sorts. When trees are grown, no matter how poor the variety, they are almost sure to be sold by some unscrupulous agent or tree peddler. If a man wants one or two thousand trees of one leading variety, he can not obtain them without purchasing a greater number of assorted kinds, which he does not want, and should not plant at any price, and if he selects but one or two leading varieties, he must pay from fifty to one hundred per-cent. more for them. The same difficulty occurs in selecting pear trees, which would not be the case if nurserymen were generally more scrupulous in discarding all inferior and worthless sorts. Pomologist.

Experience in Peach Culture.

To the Editor of the American Agriculturist:

During a long experience in raising peaches I have tried many experiments and have found the following treatment most beneficial: I sift coal ashes around the trunk of each tree to the distance of two feet, and five or six inches deep. The trunks are washed with whale-oil soap twice a year, using a quarter of a pound of soap to a gallon of water. I apply very little manure. About the 15th of April, 1st of June and September, and the middle of November, the trees are carefully examined for worms, which are cut out and destroyed. I have a Morris White tree which has been treated in this manner, and has borne a good crop for eleven successive years, and it promises to last a long time, with proper care. Northumberland Co., Pa.

Wine and Grape Fair in Hermann—Notes on Grapes in Missouri.

A correspondent, F. A. N., sends the following notes to the *American Agriculturist*: This little town of Hermann, in Gasconade County, about 80 miles west of St. Louis, situated on the Missouri river and the Pacific Railroad, is probably the only place in this State which will have held a fair this year. Out of a population of scarcely 2,000, men, women and children, so many have enlisted in our armies, that not a sufficient number of citizens liable to military duty to form a militia company have remained. As a natural consequence, the vineyards have been neglected in most cases, in some worked only by women and children, and in some not worked at all, though vine-growing is the principal and most lucrative occupation in this part of the county. In view of these sad times it was thought hardly advisable to venture on holding a fair; yet the hopeful spirit of our people predominated, and they at last, on short notice, exhibited under the auspices of the Gasconade County Agricultural Society the produce of farms and vineyards.

The main features of the exhibition were, the exceedingly fine display of grapes on boughs, in bunches, and as wines. There were, in all, some 35 varieties of grapes, grown here out doors, the most attractive of which were boughs of the Herbemont, Concord, Norton's Virginia Seedling, Catawba, North Carolina Seedling, and Cunningham. One bough of Norton's Virginia Seedling with 81 fine bunches was the most prolific on exhibition. In this region all the vines are grown on the renewal or spur-system, allowing each strong vine to have two shoots of about 6 feet length.

I have taken some pains to collect the observations and experiences of our most successful vine-growers as to the relative value of the different varieties raised here, and will give a short synopsis of my notes, which I derived chiefly from the brothers Poeschel—the successful competitors this year. The following statements are, therefore, not my individual opinions, but the result of observations by intelligent cultivators.

One circumstance in this connection deserves special mentioning—the most successful because most observing and discriminating vine growers, were not brought up as such, but commenced after they had settled here in their maturer years.

Market Grapes.—*Concord*, dark colored, showy, large, fine flavor, early, prolific bearer, quite hardy, very easily propagated.—*Union Village*, very showy, hardy, healthy.—*North Carolina Seedling*, a very valuable, showy market grape, sweet, resembles Isabella, prolific bearer, a week earlier than Concord.—*Delaware*, white or light colored, hardy, healthy, very sweet, prolific; fine bunches, berries medium.—*Allen's Hybrid*, superior to the Delaware; may rot some; will be further tested.—*Rebecca*, very fine, pretty good bearer.—*Anna*, healthy, fine.—*Cassady*, promising; to be tested further.

Wine-grapes.—*Herbemont*, though small berry, the cluster is so crowded that there is no room

for an additional berry, except at the ends of the bunches; bunches very large, heavy; very thin and delicate skin; no pulp, all juice; of the most delicious vinous flavor; two small seeds; healthy, good bearer, must be heeled in through Winter; is being propagated in preference to older varieties. Wine, all that can be desired. Ten pounds of grapes are reckoned to yield one gallon *must* at the first pressing.

Cunningham, similar to the Herbemont.

Concord, but little wine yet made of it, but that little is of an excellent, fiery character.

Norton's Virginia Seedling, healthy, extremely hardy, somewhat difficult to propagate from *cuttings* (better from layers), berries small, but crowded in the bunches; very prolific. Its wine is decidedly superior to any other red wine, whether native or foreign, and is a better keeper than the imported clarets.

Delaware makes a good strong wine, when used alone, and when mixed with other varieties.

Catawba, I put this old variety last, because it has lost many of its former friends by its being capriciously inclined to rot; it is sometimes too late in ripening, loses its foliage just when it ought to keep it, and is withal not quite hardy. Some years it behaves very well, yields an enormous crop of first quality (300 gallons *must* from one acre, worth this year $355), averaging 50 fine bunches to a healthy vine. The best vineyards I have seen this year were Catawbas, wholly or for the greater part; and the worst were Catawba also. But plenty of elbow-grease, with bucketfuls of perspiration and a generous supply of well rotten compost were at the bottom of the thrifty, luxuriant vines.

Isabella is either torn up, or, when a strong root, grafted with Concord. Itself is not worth the room it occupies. Soil and climate will not agree with this favorite of the East.

There are quite a number of other varieties which have been tested here for several years, and some (*e. g.*, Hartford, Clinton, To Kalon,) will maintain a place in public favor; others will be grown only for the sake of having them.

For the American Agriculturist.

It Pays to Lay Down all Grape Vines.

It is now generally conceded by the most successful fruit growers, that it pays well to lay down even the hardy vines, like the Catawba and Isabella. It is not necessary always to cover them with the soil, though this is sometimes the most convenient substance. I am now, in October, reaping the benefits of this precaution, in the shape of the finest bunches of Isabellas I ever raised. Not only are the bunches large, but the berries are of unusual size, and of the finest quality, so that grapes under glass are hardly coveted. The vine is trained partly upon the southeast end of the house, and partly upon the southwest, and is now twelve years old. The part upon the southeast, which has the best exposure, was left upon the trellis; that upon the southwest was laid down upon the flower border which runs along the side of the dwelling, and was covered slightly with sea-weed, coarse litter, and manure, last December, after trimming. It was raised and fastened to its supports about the middle of April. Both sides were summer pruned, and sprinkled with sulphur once. There was a fair crop upon the southeast side, but nothing to be compared to the grapes upon the other. With a little of the skill of Drs. Grant and Underhill, people who live along the Sound need not send to Croton Point and Iona Island for their grapes. The Isabella and the Catawba both ripen perfectly near the shore, in all ordinary years. The Isabella sometimes receives damage in the fruit buds during Winter, so that it bears no fruit. Laying down prevents this. It is probable that this injury is done by the sun, so that it is only necessary to protect the canes by a slight covering of straw or evergreen branches. It is but a small job while pruning, and if done, and the vines receive good treatment otherwise, I am confident that the grape crop can be made more sure than apples. CONNECTICUT.

The Hermitage Wine.

This wine, famous the world over, is so called from the ruins of an ancient Catholic hermitage found on the range of hills where the vineyard is established. The top of the hill is too cold, and at the base the ground is too rich to produce wine of first quality. Along the middle region is a belt of calcareous soil, crossing a granite debris in the subsoil; and this seems to furnish just the best material for superior wine grapes. Lands adjoining, along the Rhone, and other neighboring hills even, in which the soil is different, yield good wine, but it does not fetch more than half the price in market. The *best* of the red Hermitage wines is made from one sort of grape called *Civas;* the white from two kinds, viz.: the *Roussette* and the *Maison*. The vine-growers manure with sheep and horse manure.

The Japan Grape Vine.

In answer to an inquiry, we reply that little seems to be known about it. We are not sure that it has yet been sent to this country, though we wish it might be. From one of our contemporaries we gather the following: Mr. Fortune, the celebrated plant-collector, wrote, last year, from Jeddo in Japan, to the Gardener's Chronicle, that he had seen and tasted a native grape there of superior quality, which he thought would be an excellent fruit for America.

He had lately met in Asia Minor, with Bryant, the American poet, who told him that European grapes generally mildewed in the open air of America. He thought, however, that as other Chinese and Japanese plants have succeeded so well in America, a grape-vine might do the same: at least, it was well worth the trial. Accordingly, Mr. F. having found a first-rate grape in Japan, a native of the coldest districts and very hardy, he informed Dr. Hall, a resident American, and a true horticulturist, of its existence and character, and advised him to send it to this country. Dr. Hall had previously sent home other plants safely, and thought he could venture with this. What this gentleman has done in the premises, we do not know, but shall try to ascertain. Mr. Fortune describes the grape as a fruit of great excellence. Bunches medium size, berries brownish red, thin skinned, and the flavor all that could be desired.

Good Horticultural Prizes.

Among the prizes recently offered by the Caledonian Horticultural Society, we note the following: For the introduction of any new evergreen or deciduous shrub, of an ornamental character, and sufficiently hardy to withstand the Winter of Scotland. For the introduction of any ornamental or useful forest tree, adapted to the climate of that country. For the best model of a rustic chair, with description of materials recommended for its construction, expense, etc. For the best essay, founded on at least five years' observation, on bringing tender flowers and shrubs to such a state of hardiness, as to enable them, in ordinary situations, to endure the climate of Scotland. For the best essay, founded on observation and experiment, on the effects produced on the cion and its products by the stock on which it is grafted. For the best description of those diseases that appear in the bark of trees, which have hitherto been indiscriminately styled "canker," with mode of cure.

In another society, we observe that many of the premiums offered to laboring men consist of farm and garden implements, or articles of household furniture, or of books, trees and seeds. He who carries off the greatest number of prizes is to have the present of a splendid wheelbarrow! Might not our societies gain something in usefulness by adopting some such a system of prizes?

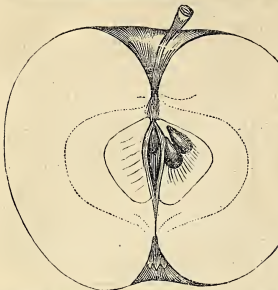
Enthusiasm for Fruit-Growing.

A subscriber, in a note to the Editors of the *American Agriculturist* about his fruit orchard, breaks out into the following strong language: "The most pleasant, most ennobling, and most wholesome of human employments, is fruit growing. It has no seasons of excessive toil, such as other farm labor involves at seed-time and harvest; it has nothing repulsive and shocking, like many operations in the care of, and slaughtering, animals; it is not confining, and soul or body-dwarfing, as are most mercantile, mechanical and professional pursuits. Each department of its labors is fit for saints—even for women; while the harvest—the gathering of the luscious and beautiful fruits—is suitable pastime for angels on gala days! What can be more paradisian here on earth than a snug fruit homestead accessible to a good market? With small capital and easy labor, it will yield a comfortable subsistence, and yet afford plenty of leisure in Winter for traveling, visiting, writing, study, or whatever is prefered. Parents will do well to consider these facts when counseling their sons as to choice of occupation."

THE BEST SHADE TREES.—For the beginner, we would say, plant at first, native, well-known hardy trees. These will include, generally, the white elm; the rock maple, silver, red and black maples; the white ash, the white oak, chestnut, and perhaps a few others. To these, we would add a few evergreens, such as white pine, balsam fir, black and white spruce, and arbor vitæ. Then we would go on with the Norway maple; English, Scotch and Dutch elms; Scotch larch, European Mountain ash, Norway spruce, Siberian Arbor Vitæ and a few other foreign evergreens.

WATER-CRESS.—This is a fine relish in Spring and is proverbially healthy. In Paris, it is cried through the streets under the name of *la sante du corps*,—the health of the body. In its natural growth, it is found along water-courses, but is also raised in artificial ponds. These ponds are bottomed with several inches of rich soil, in which plants are then set out, when the water is allowed to flow over them. They start soon, and grow rapidly.

A NOSEGAY OF FRUIT.—At a late party, we observed this novelty. It was composed of a large variety of different colored grapes, pears, plums, etc., arranged *a la bouquet*, with leaves worked in between them. The effect was fine.



The Westfield Seek-no-further Apple.

Names do not always indicate real qualities, especially among fruits. Many can testify to this from costly experience in the purchase of trees and plants by catalogue; it has frequently been found that the name was almost the only thing the purchased article had to recommend it. In this instance, however, the name, though pretentious, is not misapplied. For all qualities of tree and fruit this variety is unexcelled. It originated in Connecticut, but has been extensively disseminated both west and south, flourishing well in most localities. The Westfield Seek-no-further is thus fully described by Elliott: *Fruit*, medium; *form*, regular, roundish conical, broad at base; *color*, light yellow ground, the sunny side striped and splashed with red, small russet dots shaded around with light russet yellow, often considerable russet about both stem and calyx; *stem* long and slender; *cavity*, open, regular; *calyx*, usually small, closed, sometimes open, with short segments; *basin*, regular form, moderate depth; *flesh*, yellowish, tender, subacid, pearmain flavor; *core*, medium; *seeds*, ovate. Ripens from November to February. When grown in rich, loamy, alluvial soils at the south, it is much russeted, and about the stem the russet has the appearance of rich bronze; progressing northward, it gradually loses its russet, until, on light sandy soils, in Michigan, it becomes a pale yellow ground, with stripes and splashes of clear red, and minute dots. This description will render the fruit easily recognizable. It should have a place in most orchards, both for family use and for marketing.

Experiment in Transplanting—A Hint.

Having occasion, last Summer, to set out a Brugmansia while in full leaf, into the open ground, we observed that it wilted badly, and shed a portion of its leaves. Plentiful watering of top and root, with shading, restored it to partial vigor. But as it did not look quite right for some time, we took a sharp spade and cut all around it, taking off all the long roots close up to the ball of earth. Then, we worked in a lot of rotten dung all about the ends of the cut roots, and applied a heavy dose of water. This treatment was of course followed up by shading and mulching. In the course of ten days, the plant began to grow vigorously, both in root and branch, and soon looked as bright and healthy as one could desire. This result was owing to the fact that when some of the long, coarse roots were cut off, a large mass of new fibrous roots were formed, and that these numerous hungry mouths were supplied with a plenty of food close at home.

Now for the hint. Do we not find here the reason why many transplanted things, such as lettuce, cabbage, tomatoes, celery, etc., as well as some flowering plants, do better when transplanted? The "pricking out" causes them to form a multitude of short, new roots, and being set in rich soil, they grow vigorously. Why not apply this principle in the culture of the melon, cucumber, the grape and the pear? Keep the roots small, numerous, and feed them high? Certainly, it would be a saving of room. This subject is worthy of more careful experiment. It is often advised to be careful not to disturb the roots of trees. The Gardener of the Bible proposed to "dig about and dung" the unfruitful fig-tree. May we not often imitate him to advantage?

A New Mode of Striking Cuttings.

The plan indicated by the accompanying engraving is so sure and so simple as to recommend itself for practice by every body. Any lady can thus rapidly propagate pinks, roses, geraniums, etc., without much trouble or loss. Take a large, wide-mouthed pot, and partly

fill it with small stones or pieces of broken pots, for drainage, as seen at *b*. Then take a pot two inches smaller, stop the drainage hole of this with stiff clay or with a cork, to make it water-tight, as shown at *a*. Set this inside of the large pot, on top of the drainage, so that the brims of the two will be on a level. Now, fill the space between the pots with sandy loam, and insert cuttings all around the pot, as shown at *c*. Have the lower end of each cutting touch the surface of the inner pot. This pot is to be filled with water. Now, plunge the pots in a gentle hot-bed, or, if it is Summer, cover the cuttings with a bell-glass. The moisture will find its way through the sides of the inner pot as fast as the rootlets of the cuttings want it. After a suitable time, the inner crock can be carefully lifted out, to examine the cuttings and see if they are rooted. If they are not, it can be restored to its place without injury to the cuttings. When the young plants are started, they can be taken off, one at a time, with a broad-bladed knife.

THE PELARGONIUM.—It is not altogether an affectation which makes gardeners distinguish between this and the Geranium. The name originated thus: Pelargonium is the Greek name of the bird called stork. It was first applied by the German botanist, Burman, on account of the resemblance between the bill of that bird and the long, pointed seed capsule. The plant, originally from the Cape of Good Hope, has been found, also, in Australia, in Polynesia, and St. Helena.

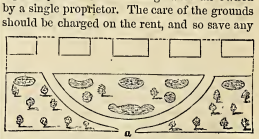
Planning Flower Gardens.

One of the worst ways of planting a flower-garden is to set out indiscriminately, plants of all colors, of different hights and habits of growth, without regard to any system or design. It is enough to make an orderly man's head ache. Here is a verbena, next a poppy; beyond is a petunia, and hard by is a lilac-bush; next is portulacca, and next a morning-glory, and so on. Such a confused mass of things is at best childish. Let there be some kind of system—almost any is better than none. This is a good one: Let the plants on a particular bed be similar in form, or color, size or style of growth. If different colors appear in the same bed, let them be of such kinds as will harmonize well together.

It is a growing custom, and a good one, to have the beds small, and only one color to a bed. Then, when the garden is viewed from the windows or veranda of the dwelling, it has the appearance of embroidery or carpeting. Mr. Loudon recommends drawing out in Winter, on paper, the plan of the garden, and coloring the beds with paint, so as to see what the effect will be. Make the arrangement of colors a long and careful study. When the plan is fixed upon, it will be the simple work of the gardener to find the plants which will give the required colors during the entire Summer, and at the least expense. We suggest this hint to the florists of the *Agriculturist* family, for winter study.

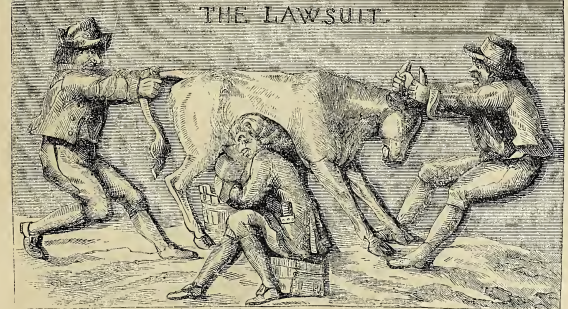
The Embellishment of City Door-Yards.

One excellent mode of adorning city yards is, to throw the front grounds of several buildings into one enclosure, and have them embellished with trees and flowers, under the care of a single gardener. The engraving below will give some idea of this plan. An arrangement of this sort would afford quite a considerable park or pleasure-ground for the different families to enjoy in common. It would furnish a much greater variety of trees and plants than could be possible in any one yard. By committing the premises to the care of a single gardener, it would save much care and expense to each family. The plan would be excellent, especially where the buildings were all owned by a single proprietor. The care of the grounds should be charged on the rent, and so save any



further trouble. The cut represents only one of a great number of plans which might be adopted in laying out the ground. Instead of one wide circular walk, *a*, terminating at the street, there might be several narrow and straight paths running from each door directly to the curb-stone; or there might be any number of serpentine walks, and flower beds and shrubs. The success of the whole arrangement would, of course, depend upon the good understanding maintained among the several tenants. Common interest in an attractive garden would seem to be an excellent means of promoting mutual good forbearance and good will.

[This plan, prepared by an associate, has some advantages, and in some circumstances may be adopted; but as a rule, we should say, let every family have its own garden, and enjoy



This engraving, made for the *Agriculturist* several years since, has been extensively copied, and has, we trust, done at least some good. Indeed, we have heard of several lawsuits in progress, which the "clients" stopped by mutual concessions, after seeing the above picture. The gist of it is plain; the clients waste their strength and substance, while their counsellors quietly enjoy the fees (milk). As we have already remarked, the picture is defective, in not indicating the other attorney drawing his share of the "fees." We are glad to announce that the famous lawsuit here pictured, which began many years ago, as will be seen by the ancient costume of the parties, has at last come to an end. We have in the hands of the engraver for the January *Agriculturist*, a capital original illustration of the final results, which will afford no little amusement and instruction to all.

the pleasure of cultivating it. The healthful exercise, and the improvement of the taste would be lost, if the work be done in common with others, or be delegated to a hired gardener. O.J.]

House Tools—Hints to the "Men-folks."

We dislike to offend by too plain talk, so the reader will please understand that in what follows, we do not refer to him, but to "another man."

On a recent evening we happened into his house (the other man's house) and saw his wife trying to cut out a garment; or possibly it was a patch for a coat for her boy or her husband; but it was hard work, and a ragged edge was left. She made sundry efforts and by clipping several times it seemed to come into about the desired shape. The fact was, the rivet was loose, and as for a cutting edge, that was worn off years ago. We noticed that she looked at her thumb and fingers to see if they were blistered. Three minutes with a hammer to head the rivet, and a grindstone, whetstone, or even a file, to give a cutting edge, would have made all right, saved the wife several hours of time in the course of each week or month, and enabled her to do her work much more easily, and to patch more neatly. But her husband was a "hard working man," and hadn't the three minutes' time. Having some business with him, we found him at the store sitting in his *accustomed* place on the counter.

The wife went to fix up the wood fire, and attempted to lift up a brand with the tongs, but the legs would turn and slip by each other. After several vain trials she pushed up the fire, and swept up the coals that had scattered from the falling brand. One minute's time, with a hammer, would have tightened the joint and made the legs meet square.

A daughter was trying to cut hash or mince meat, but the thug, thug, indicated that the dull knife was only mashing and not cutting the meat. The tired girl showed plainly that she had been at it for an hour or more. Three minutes with the grindstone, or whetstone, or a file, once a month, would give that knife a sharp edge, and save many a pound of elbow grease, many wearisome hours, give that daughter a little extra time to read the *American Agriculturist* (only the other man "don't take it"), and the finely cut tough meat would be far more digestible than when swallowed hurriedly in large pieces. (A Hale's meat cutter, costing $3.50, would cut the hash for a large family in four minutes, or in less time, and do the work excellently.)

One Monday we took dinner at the house of this "other man." The bread was not in smooth cut slices, but appeared as if haggled off from the loaf with the back of a scythe. The dried beef, instead of being in nice thin shavings, nice to look at, and nice to eat, was in thick, scraggy pieces, as if chopped off with a very dull hatchet. The table knives appeared to have been sharpened on the iron shovel handle, or on the stove edge so long, and were so much rounded off, that except from the shape it would have been difficult to tell on which side the edge *had* been. Five or ten minutes with the grindstone would have given a good edge on one side of every knive in the house. How much work it would have saved in the kitchen, in preparing meals, cutting up meats, paring potatoes, etc., the reader may figure up. (If the writer was the wife of this "other man" he would take a few lessons on knife-sharpening and be independent.)

Glancing through the open kitchen door, we saw Bridget *trying* to stop an old leak in a boiler, with a plaster of dough, but it would come off, and the water would run on to the stove and over the hearth. A drop of solder would have saved all this trouble and vexation. If the "other man" had read the *Agriculturist* for November, 1859, page 343, he would have known how to apply the solder himself in less than three minutes.—We have made several calls at this "other man's" house, but the above will do for a beginning. Please show him this copy of the *Agriculturist* and perhaps his curiosity may be excited to read more of his personal matters which will be found in the next volume.

About Artificial Limbs.

It was reported a few years ago, that a monomaniac in France, who believed in the doctrine of chance, conceived the idea that the first human body was the result of a chance aggregation of particles of matter. Instead of trying to prove his theory by reasoning, or on scientific principles, he went to work to demonstrate it by actual experiment. Learning from chemical analyses the kind of atoms entering into the composition of a perfect body, and the proportion of each, he collected the requisite materials, put them into a cylinder, or kind of churn, and commenced operations. His idea was, that, by the long continued agitation of the particles, he would in time bring them into just the proper position and arrangement, and a human body would be the result. He further believed that as he had collected only pure materials, a body more perfect than any one now existing among deteriorated mortals would be the result. If we remember rightly, he was a bachelor, and vowed celibacy until he had produced a perfect woman from his tub or churn. The last heard of him, he was turning away at the crank, as he had been for several years before.

Leaving our monomaniac to work on until his own fragile and ill-composed elements themselves fall asunder, it is pleasing to turn aside and contemplate the real progress that has been made toward con-structing artificial bodies, or in supplying such of the non-vital portions as chance to be lost by disease or accident. With our own eyes we have seen artificial *hands, feet, legs, arms, ears, eyes, noses*, not to mention the more common ones of teeth, and hair, etc.—all of which were so natural in form and appearance, as to escape the notice of the casual observer. Some of these artificial members are so perfect in form and construction as to serve nearly all the purposes of the natural ones. Having a friend who had lost a leg (shot off above the knee in a battle last Spring,) we had occasion to examine the construction of this particular member, and we confess to an agreeable surprise at the perfection to which the manufacture has been carried. After examining some of the most noted forms, any one of which would be a great acquisition to a legless man, we were led to give the preference to those made by Mr. Selpho, of this city. We have not room for a minute description of the construction, and of the means and appliances by which the manufacturers imitate the action of the natural limb. Essentially, the external appearance of the limb, in form and color is an exact imitation of the natural one. The structure is an ingenious combination of tough wood, leather, steel, India rubber, etc., by which lightness, strength, pliability and durability, are admirably secured. Fig. 1, gives the general appearance of an unclothed leg of nearly full length. Inside of this, as partly shown in fig. 2, are joints,

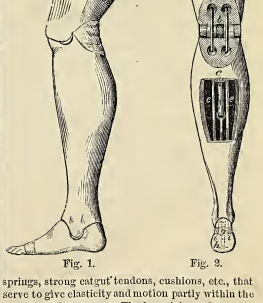


Fig. 1. Fig. 2.

springs, strong catgut tendons, cushions, etc., that serve to give elasticity and motion partly within the control of the wearer. The knee joint and the heel joint, bend and yield to pressure almost like the natural structure. We had the engravings specially made for the *Agriculturist*, but find it difficult to explain the various parts without having the reader present to see the actual limb, and will therefore not attempt it. The leg, as made by Mr. Selpho (of

No. 516 Broadway, New-York,) seems to excel in the simplicity of the internal machinery, and the consequent little liability to get out of repair; in the strength and broad bearing of the knee joints; and especially iu the arrangement by which a side motion is given to the foot, so that in steppiug on an uneveu surface, or upon an inclined plane, the foot yields laterally, and the bottom and ankle joint adjust themselves to the inequality.——*Artificial Arms* are made in almost equal perfection. As an illustratiou, we slipped one of our arms into an artificial one so as to be able to use our shoulder joint only, and yet by means of the concealed strap, tendons, and springs. we eould take off our own hat with the artificial fingers, place it on the table, and return it to the head agaiu.——We are glad to know that arrangements are made to supply our maimed soldiers with these most valuable artifieial limbs, at a low price. The Government allows $50 to soldiers for each limb lost, towards proeuring an artificial one. A moderate additional contribution from frieuds will pay the extra eost. Particulars as to price, etc., can be obtained by addressing the manufacturers as above, or in an advertisement.

A Cutting Board Convenient.

Ladies, especially those who do the cutting at meetings of Sewing Societies, Relief Associations, etc., know how tiresome it is to stand at a table all the afternoon or evening, preparing work. At one of these meetings the other evening, we noticed a simple and convenient cutting board, which may be in general use, but we had not before seen one. It is a board about 3 feet long, and 1½ to 2 feet wide, to hold upon the lap. On one side a half circle is cut out so that it fits partly round the body, and the arms may rest upon it. The other side is partly rounded to take off the sharp corners that would otherwise stand out in the way. Such a board is convenient both for cutting and mending. Auy husband or son will make oue in a few miuutes. The board should be thin, and of light seasoned wood. We will suggest an addition, thus: Bore a hole in each outer corner, and put two sticks, say broom sticks, for supporting legs to the outside; the other side rests on the lap. The sticks can be then taken out when not iu use. We may claim a patent for this "improvemeut," but it is free to all readers of the *American Agriculturist*, which includes about everybody and the rest of womankind.

Housekeepers, Help Each Other.

A REQUEST.

We respectfully solicit the aid and co-operation of all interested in housekeeping to help improve this department of the *Agriculturist.* During the past year several hundreds of items, hints and suggestions have been given, of which some at least have beeu interesting and useful we trust. But the household department has not been as full and varied as we could wish, or as we intend to make it. Our absence a part of the time has somewhat prevented as much personal attention to these columns as we expect to give hereafter. But while we shall do all we can, we ask our readers for abundant contributions. Wheu two or more housekeepers spend an hour together, each one usually gains some new hint or idea to put in practice. No one makes a day's visit at the house of a friend without seeing or hearing of some mode of doing a thing that leads to improvement in her own operations. Now we would like to gather up these ideas and spread them before tens of thousands. What is uew to any oue person, will be likely to be so to a great many others. We believe that there is just as great a chauce for improvements to be made in the house, as on the farm—iu labor saving implements, in the most important topics of the care and health of the children, in the preparation of good, healthful, economical food, etc. Usually, when we solicit information, the reply is, "I am not used to writiug for the papers"—especially from those who are most excellent practical housekeepers. But this need not be an excuse. We do not ask any one to edit; give us particulars, the ideas, the hiuts, no matter in how common language, and we will attend to putting them in shape for the public. Let all help in this matter, not merely those who can better tell how to do a thing than do it, but those of the opposite class. She is a public benefactress who gives to a thousand others a single hint that tends to lessen labor and care, or leads to even the slightest improvement in any common household operation.

To Cure Hams—Loss of Weight.

Johu C. Bishop, Fond du Lac, Wis., writes to the *American Agriculturist:* "I have never failed of having most excellent hams by using the following recipe—the shoulders are equally good, only fatter: Rub the hams thoroughly around the bone with salt, usiug the best quality. To 4 pails water add one quart molasses, six quarts salt, and one tablespoonful of saltpetre: they should remaiu in this pickle covered, five weeks. Cobs are preferable to any other article to smoke with; sack and whitewash, and you will have first quality hams the year round. In packing my pork last Fall, it occurred to me to ascertain how much is lost in weight by smokiug hams. I cut out a ham which weighed 24¼ lbs. After taking from the pickle, in which it had remained some 5 weeks, it weighed 25¼ lbs. To-day, one month after smoking, it weighs 22⅛ lbs., having lost over 3 pounds. A barrel of side pork weighing 200 lbs. that I packed freed from boue and most of the lean meat, on being re-weighed had gained 8 pounds.

Mince Pies—Spirits in Cookery.

Mrs. M. L. Thomson, of Falmouth, Ky., sends for the household department of the *American Agriculturist*, the following: Take 4 lbs. of boiled meat (a boiled beef's heart is very good), ½ pound suet, 4 ounces cinnamon, 2 ounces mace or nutmeg, 1 ounce cloves, 4 pounds raisins, 1 pint molasses, 1 quart brandy, and sugar euough to make quite sweet. To all the above add an equal weight (nearly 12 lbs.) of tart apples chopped fine. It will keep five or six months. As used for pies from time to time, add just before baking a tablespoonful of vinegar, or old cider, to each pie. [The above is doubtless good, but a serious objection is the amount of brandy. The taste for alcohol which leads to its more frequent after use, and often to excess, is very often created by the use of wine or brandy sauces, brandied fruits and pies, etc., eaten at the paternal board. Were there not this danger, we should less object to *pure* brandies and wines occasionally in cooking. As it is, we thiuk it always safer to eschew all alcoholic mixtures in cooking. One generous, noble young man lost to society through such means, is a greater loss to his friends, aud to society, than the sacrifice of all sweetmeats, condiments, aud stimulants, for ten thousand tables. It is the generous hearted, active, energetic, social young men, those worth most to society, who are by far the most liable to be overcome by evil habits, for these take the strongest hold upou such.—ED.]

How to Cook a Rabbit.

L. E. Palmer, Luzerue Co., Pa., writes to the *American Agriculturist:* At the preseut season, country families, especially those which number a trap-setting juveuile or two, are coming into possession of various "small deer" of this sort. Many questiou whether it is "worth while" to dress aud cook these chance acquisitions. Plain housekeepers are apt to be shy of wild game from the idea that it requires some intricate process to render it really excellent. Rabbits cooked in the following simple way are prouounced better than that great standard of comparison—'chicken'. Prepare for stewing the same as with fowls, aud after par-boiling, change the water, adding salt. Three hours steady stewing is not too much for an old rabbit; the great point is to get it teuder, but not ragged. When cooked, add two-thirds of a teacup of butter, and stir in while boiling, two tablespoonfuls of flour in a cup of water, theu a little pepper. Toast to surface browu, but do not harden, three slices of bread; butter them freely while hot, lay on the platter, and pour the stew over them.

Another Pennsylvania lady, Mrs. E. McC., Northampton Couuty, whose husband is equally expert with a gun in bringing down rabbits at home, or as a "militia man" ou the southern border of the State, gives us her method of preparing a rabbit as follows: After skinning they are thoroughly freed from blood with cold water. They are then left over night in weak salt water, which is poured off in the morniug, and new salt water added, in which they stand until ready for cooking. This water is made just salt enough to fit the flesh for eating. They are then boiled until tender, when the meat is taken out, aud flour and butter, first rubbed together, is stirred in, and well peppered, and the whole poured over toast, upon which the meat is laid. A few sprigs of parsley added, improve the taste for many persons.

A Stuffed Beefsteak.—Prepare a dressing of bread scalded soft aud mixed with plenty of butter and a little pepper aud salt. Lay it upon one side of a round of steak, cover with the other and baste it down with needle and thread. Salt and pepper the outside of the steak and place in a dripping pan with half an inch of water. When baked brown on one side, turn and bake the other.

The Queen of Puddings.—L. E. Palmer, Luzerne Co., Pa., contributes the followiug to the *American Agriculturist*, and challenges any housekeeper in the country to give any mode of preparing a more delicious light pudding: One piut of nice fine bread crumbs to one quart of milk, one cup of sugar, the yolks of four eggs beaten, the grated rind of a lemon, a piece of butter the size of an egg. Bake until done but not watery. Whip the whites of the eggs stiff and beat in a teapcupful of sugar in which has been stirred the juice of the lemon. Spread over the pudding a layer of jelly or any sweetmeats you prefer. Pour the whites of the eggs over this and replace in the oven aud bake lightly. To be eateu cold with cream. Is second only to ice cream, and for some seasons better.

Another Nice Pudding, by the same contributor: Three tablespoonfuls melted butter mixed with one cup of sugar; 1 egg well beaten; 1 pint of flour; 2 teaspoonfuls cream tartar; 1 of soda; 1 cup sweet milk. Beat well, and bake 30 minutes. Serve hot with the following sauce: Two cups sugar with 1 cup of butter; 1 cup of currant or other wine added a little at a time, as the butter and sugar are melted—the pan containing it being set in hot water ten minutes or so. ["Spirits" agaiu.]

Pumpkin Bread.—Coutributed to the *American Agriculturist*, by Mrs. S. Washburn, Westchester Co., N. Y. Stew oue small pumpkin, in the same manuer as for pies; while boiling, stir in Indian meal until it becomes of the cousisteuce of mush, adding a teacup of molasses and a little salt. Theu take it out in some wheat flour—have your sponge light—and when sufficieutly cool, mix, mould and bake.

Potato Pie.—Contributed to the *American Agriculturist* by Indamora Hyatt, Westchester Co., N. Y. Mix the crust iu the same manner as for chicken or beefsteak pie, aud place it in a deep pie dish or dripping pan; cut into it one small onion, and fill eveu full with fiuely sliced potatoes; add a little butter, and pour into the pan as much sweet milk and cream as it will contain. Season with salt and pepper to suit the taste; cover aud bake in a slow oveu. [Pray, leave out the ouion.—ED.]

WORKING BACKWARD.—A worthy Scotch couple, when asked how their son had broken down so early in life, gave the following explanation: "When we began life, we worked hard, and lived upon porridge, and such like, gradually adding to our comforts as our means improved, until we were able to dine off a bit of roast meat, and sometimes a boiled chuckie (chicken); but Jack, our son, worked backward; he *began with the chuckie first.*"

Sunday School Lessons for Two Years.

The following 104 lessons, averaging 7 to 8 verses, are arranged in chronological order, with names of the leading copies of the New Testament History are printed in capitals, and designed for the first year. They are taken from the chapters that give within the limits of one lesson the most complete narrative of the several events. The pupil learning them will have the groundwork of the Gospel History and Chronology started in his mind. The second series of 52 lessons, for another year, printed in *italics*, are placed in their proper places in order of time. If every Teacher and Scholar has a printed copy, there will be no room for the usual excuse, "I didn't know where the lesson was." See Almanac on the back of this, for any year.

	Subject.	Chapter.	Verses.
1—ANGELS AT BETHLEHEM	Luke ii.	8 to 14	
1—*Testimony of Simeon*	Luke ii.	25 to 32	
2—VISIT OF THE WISE MEN	Matt. ii.	1 to 9	
2—*Slaughter of the Innocents*	Matt. ii.	16 to 23	
3—CHRIST AT THE AGE OF TWELVE YEARS	Luke ii.	41 to 52	
3—*The Light of the World*	John i.	6 to 12	
4—THE BAPTIST'S MISSION	Matt. iii.	1 to 12	
4—*The Baptist's Preaching*	Luke iii.	7 to 14	
5—CHRIST'S TEMPTATION	Matt. iv.	1 to 11	
5—*Christ's First Miracle*	John ii.	1 to 8	
6—INTERVIEW WITH NICODEMUS	John iii.	1 to 12	
6—*The Samaritan Woman*	John iv.	19 to 30	
7—CHRIST EQUAL WITH THE FATHER	John v.	18 to 30	
7—*Evidence of Miracles*	John v.	33 to 40	
8—DOCTRINE OF THE SABBATH	Matt. xii.	25 to 30	
9—*The Beatitudes*	Matt. v.	3 to 10	
9—PARABLE OF THE SOWER	Matt. xiii.	3 to 9	
10—*Christ Teaching by Lake*	Luke v.	3 to 11	
10—COMMISSION OF THE TWELVE	Matt. x.	1 to 7	
11—JOHN'S IMPRISONMENT AND DEATH	Matt. xiv.	1 to 12	
12—CHRIST THE BREAD OF LIFE	John vi.	26 to 33	
13—*The Syrophœnician Woman*	Matt. xv.	21 to 28	
13—THE TRANSFIGURATION	Luke ix.	28 to 36	
14—NECESSITY OF CHILD-LIKE TEMPER	Matt. xviii.	1 to 7	
14—*Parable of the Unmerciful Servants*	Matt. xviii.	21 to 35	
15—APPOINTMENT OF THE SEVENTY	Luke x.	1 to 7	
15—*Freedom of Believers*	John viii.	31 to 38	
16—PARABLE OF THE GOOD SAMARITAN	Luke x.	25 to 37	
16—THE LORD'S PRAYER	Luke xi.	1 to 8	
18—CHRIST FULLY OFFERED	John x.	1 to 9	
18—*Christ the Resurrection*	John xi.	20 to 27	
19—PARABLE OF THE PRODIGAL SON	Luke xv.	11 to 19	
19—*The Rich Man in Hell*	Luke xvi.	19 to 31	
15—*The Wicked Husbandmen*	Luke xx.	9 to 16	
15—*The Great Commandment*	Matt. xxii.	34 to 40	
20—THE LORD'S SUPPER	1 Cor. xi.	23 to 29	
20—*The Vine and its Branches*	John xv.	1 to 8	
18—*The Comforter Promised*	John xvi.	5 to 12	
21—THE ASCENSION	Luke xxiv.	45 to 53	
22—SEIZURE OF CHRIST	Luke xxii.	47 to 53	
23—PETER'S DENIAL	Luke xxii.	54 to 62	
24—CHRIST BEFORE THE SANHEDRIM	Luke xxii.	66 to 71	
25—CHRIST BEFORE PILATE	Luke xxiii.	1 to 7	
26—CHRIST BEFORE HEROD	Luke xxiii.	8 to 16	
27—CHRIST SENTENCED BY PILATE	Luke xxiii.	18 to 25	
28—THE CRUCIFIXION	Luke xxiii.	26 to 46	
29—DEATH OF CHRIST	Luke xxiii.	44 to 53	
30—THE SEPULCHRE GUARDED	Matt. xxvii.	61 to 66	
31—RESURRECTION OF CHRIST	Marc xvi.	1 to 8	
32—CHRIST'S APPEARANCES	Mark xvi.	9 to 20	
33—THE ASCENSION	Acts i.	6 to 12	
34—GIFT OF THE HOLY SPIRIT	Acts ii.	1 to 7	
35—PETER BEFORE THE SANHEDRIM	Acts iv.	5 to 12	
36—COMMUNITY OF GOODS	Acts iv.	31 to 37	
37—MARTYRDOM OF STEPHEN	Acts vii.	51 to 60	
38—CONVERSION OF PAUL	Acts ix.	1 to 8	
39—VISION OF CORNELIUS	Acts x.	1 to 6	
39—*Paul's First Preaching*	Gal. i.	17 to 24	
40—FOUNDING OF THE CHURCH AT ANTIOCH	Acts xi.	19 to 26	
41—PETER DELIVERED FROM PRISON	Acts xii.	1 to 6	
42—PAUL APPOINTED MISSIONARY	Acts xiii.	24, to xiii. 5	
43—*Paul Preaching at Lystra*	Acts xiv.	8 to 15	
43—DECREE OF COUNCIL AT JERUSALEM	Acts xv.	22 to 29	
44—*Paul's Departure for Companion*	Acts xv.	1 to 4	
44—PHILIPPIAN JAILER CONVERTED	Acts xvi.	25 to 31	
45—PAUL'S PREACHING AT ATHENS	Acts xvii.	22 to 28	
32—*Paul's Preaching at Corinth*	Acts xviii.	1 to 6	
33—*Exhortations to the Thessalonians*	1 Thess. v.	16 to 23	
34—*The Man of Sin*	2 Thess. ii.	1 to 8	
35—*Paul's Preaching at Ephesus*	Acts xix.	1 to 8	
36—*Works of the Flesh and Spirit*	Gal. v.	16 to 26	
46—TUMULT AT EPHESUS	Acts xix.	21 to 27	
37—*Epistle of Schism*	1 Cor. i.	10 to 19	
38—*Excellence of Charity*	1 Cor. xiii.	1 to 8	
39—*Ministers in Jerusalem*	2 Cor. ix.	1 to 5	
30—*Fidelity in Doctrine*	1 Tim. iii.	14, to v. 5	
31—*The Final Judgment*	Rom. ii.	9 to 16	
32—*Christian Experience*	Rom. vii.	1 to 6	
33—*Effect of the Law*	Rom. vii.	1 to 14	
34—*Christian Adoption*	Rom. viii.	12 to 17	
35—*Christian Election*	Rom. ix.	17 to 24	
36—*Christian Loyalty*	Rom. xiii.	1 to 7	
37—*Eutychus Restored to Life*	Acts xx.	6 to 12	
47—ARREST OF PAUL AT JERUSALEM	Acts xxi.	27 to 35	
38—*Paul before Felix and Festus*	Acts xxiv. 24, to xxv. 4		
48—PAUL BEFORE AGRIPPA AT ROME	Acts xxvi.	1 to 8	
49—STORM DURING PAUL'S PASSAGE	Acts xxvii.	15 to 20	
50—PAUL ENCOURAGES THE MARINERS	Acts xxvii.	27 to 34	
51—ESCAPE FROM THE WRECK	Acts xxviii.	38 to 44	
52—PAUL'S ARRIVAL AT ROME	Acts xxviii.	1 to 10	
39—*Christian Purity*	Eph. iv.	17 to 24	
40—*Doctrinal Rules*	1 Tim. iii.	10 to 15	
41—*Christian Fidelity*	Phil. iii.	8 to 15	
42—*Christian Steadfastness*	Col. ii.	18 to 23	
43—*Christian Circumspection*	Jas. v.	15, to iii. 5	
44—*Effects of Prayer*	Jas. v.	11 to 18	
45—*Christian Sobriety*	1 Pet. iv.	1 to 8	
46—*Ministerial Faithfulness*	1 Tim. iii.	16 to iv. 6	
47—*Christian Patience*	2 Tim. iv.	1 to 8	
48—*The Christian Graces*	2 Pet. i.	5 to 12	
49—*Seditious Professors*	Jude.	8 to 15	
50—*Christian Privileges*	1 John iii.	1 to 8	
51—*Celestial Employments*	Rev. v.	8 to 14	
52—*The Millennium*	Rev. xx.	1 to 8	

Entered according to act of Congress in the year 1863, by ORANGE JUDD, in the Clerk's Office of the District Court of the United States for the Southern District of New York.——The above table of Lessons originated with Orange Judd, Sunday School Superintendent at Flushing, Long Island. The final selection and arrangement of the Lessons were made by DR. JAMES STRONG, S. T. D., (author of the Harmony of the Gospels, etc.) The lessons were copy-righted simply to stop their improper use for speculative purposes. Any school can adopt them. Copies can be obtained by addressing Mr. O. Judd, Editor of the *American Agriculturist*, New-York City.—Cost, 50 cents to $2.00 per *hundred*, according to quality of paper, postage, etc. $1 will pay for 100 on fair paper, including *postage* by mail.

To S. S. Superintendents and Teachers.

Of the annexed series of lessons, those in capital letters were published last year and have been widely used. We shall have both of these series printed, as here, neatly, with a Calendar of Sundays upon the back to show the lesson in either series for any Sabbath from 1863 to 1869 inclusive. When desired, three sample copies will be mailed post-paid for a three-cent stamp.

But we now wish to call special attention to a very excellent little *Question Book* on these lessons which has several new and valuable features, and which we feel quite sure will please all, and come into general use as soon as known. It is now in press and will be out in a week or two. It gives each lesson in full, with the time and place of occurrence; a condensed history connecting each lesson with the preceding one; a series of questions directly on the text for small scholars; a series in small type for older scholars and adults, with each question answered directly or by a reference. These questions and answers give much information not accessible to the general reader. The book is thus a history, a chronology, and a commentary, as well as a question book. The price will be only 10 cents for 112 pages, in paper covers, and will be specially useful to teachers not supplied with Commentaries and other books for reference. We are free to speak thus strongly, as we have not the slightest pecuniary interest in the book. Send and get a specimen copy which costs only 12 cents post-paid.

The Editor with his Young Readers.

Long Days—No "Adieus."

Well, young friends, we have journeyed along together through another year. It seems to us but as yesterday that we wrote the closing item of 1861. To some of you the year has probably appeared to be very long. Every successful year of your lives will seem shorter than the preceding one, and for this reason: When the mind is fully occupied, we take no note of the passing moments; we are so intent upon business or pleasure, that the minutes and hours fly even too swiftly. Now, the older one grows, the more thoughts he has to occupy his attention, little boys and girls do not have to trouble themselves about their parents or friends provide their food and clothing, and they are themselves often troubled to find play enough to fill up their hours and days. When the real work of life comes, and you want to accomplish a great deal in a short time, you will be heartily wishing for longer long days.—But we started to say something about the closing year, and to write a parting paragraph. Yet, on a second thought, this does not seem necessary, for we hope all our *Agriculturist* family will come around the common table another year. We can not spare one of them. The Editor in Chief looks forward to many pleasant days in the coming months. This year he has been absent, seeking knowledge in foreign lands, and has had little to say to you except by letters. Some of the letters written in Europe are not yet published. These, with the engravings, will interest you, he hope. There were very curious things seen in France, Switzerland, Germany and Belgium, not yet described. And there are many other interesting things to fill up the pages devoted to the young people. The good associate editors have done what they could for you during the past months, but the Editor himself thinks that no one else can have quite so good a time with the little folks, as he can. He intends to be "at home" most of next year, and he cordially invites all his former young friends to gather around him, and bring new ones as many as they can persuade to join our goodly company. We shall begin at once to prepare the January number, so as to have it all done before Christmas. Please hurry along the names, old and new, so that our mail clerks can get them all entered on the books, ready to start off the next number in good time. Expecting to meet you all again next month, we will not write any "adieus" or "farewells" here, but cordially wish you all a MERRY CHRISTMAS.

Served them Right.

A correspondent relates that the story of "Peter after a Rabbit," in the November *Agriculturist*, reminds him of the following occurrence: A gentleman, after riding some distance in one of our City cars, stepped out and left a small package lying on the seat. The cars went on, and when at a distance of several blocks, a rough looking customer also got out, taking with him the package, which he had observed as soon as the gentleman left it. Almost immediately he was followed by another man of about his own stamp, and presently loud quarreling was heard between the two in the street. Each insisted that the package belonged to himself. The words "liar" and "thief" were quickly followed by a rough and tumble fight, each striving to get possession of the prize. In the struggle both fell; the package, which proved to be a bottle, was broken, and its contents were liberally spilled over both combatants, when they both set up a howl of pain. The bottle was filled with strong sulphuric acid, which quickly burned into their flesh like fire. This effectually stopped their fighting, and gave them a pretty severe illustration that "honesty is the best policy."

Puzzled for an Excuse.

Some years since while the cholera was prevalent in Virginia, the inhabitants, particularly the negroes, were greatly alarmed. A most gifted one was a negro boy, who, having heard his father say the cholera would soon be along that way, left his work one day and betook himself to the woods. Here he was found by his overseer, soon after, fast asleep. Being taken to task for leaving his work, he excused himself on the ground that "not being prepared to die, he had gone to the woods to meditate." "But," said the overseer, "how was it that you went to sleep?" "Well, I don't know, massa, how dat was 'xactly," responded the negro, "but I speck I must have overprayed myself!"

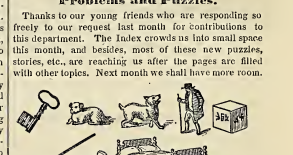
"Random Descriptions"—An Amusing Game.

A lady subscriber sends to the *American Agriculturist* the following instructions for playing an amusing game, which may be properly called "Random Descriptions." One of the party being provided with slate and pencil, calls on each of the others in turn to name some descriptive adjective, as good, pretty, ugly, fast, slow, etc. These are written in a column at the left of the slate. The writer then places his pencil opposite one of the words and calls for the *name* of one of the party, which being called for, is written next to the *adjective*, and then the name of the whole company is written in turn in each opposite the adjective which comes in the order of the list.

The writer now commences at some other part of the list, and each of the company names some *locality*, as "on the house," "under the barn," "in the woods," etc.; and these are added, one to each name. In the same manner, some *act* is next written down, opposite the preceding, as "hauling saw-logs," "sleeping soundly," "shelling corn," etc. When all is completed the sentences are read aloud. The ludicrous situations described will often cause the greatest merriment. Thus it may happen that "Sweet Susan was before the looking glass making faces;" or that "Slow John was on the railroad, running a race with the engine;" or that "Long John was hunting rebels, in the wash-tub." Of course, much of the fun will depend on keeping the sentences secret until all are read.

Problems and Puzzles.

Thanks to our young friends who are responding so freely to our request last month for contributions to this department. The Index crowds us into small space this month, and besides, most of these new puzzles, stories, etc., are reaching us after the pages are filled with other topics. Next month we shall have more room.



No. 20.—*New Rebus*, which contains good advice.

No. 21.—*Riddle.*

A four handed rider, on a two legged steed,
Whipped up the feathers and made very good speed.

Can you solve this riddle. Our answer will be an amusing engraving; look out for it in the next number.

No. 22.—*Arithmetical Problem*, proposed by Willie Perry, Waukesha Co., Wis. When gold is worth 22 per cent. premium, reckoning a paper dollar as par, at what per cent. discount is paper money reckoning gold as par?

No. 23.—*Arithmetical Problem*, by the same: A owns 3-5ths of a calf, and B, 2-5ths. They agree to admit C as a partner, and to divide the calf equally; C to pay $1 for his third. How shall A and B divide the dollar?

Answer to *Rebus* No. 19 (page 345, November).

"The cook doth crow to let you know
What time to rise if you be wise."

Correct answers to No. 19, have been received from C. L. Shubrick, Hattie Hanford, Mary A. Purdy, Jno. D. Talbot, Elsie B. Blackman, J. G. Barnett, "Jennie," A. B. Martin, Fannie J. Minor, C. S. Wheeler, Elgin Angell, A. C. Siewers, M. J. Burr, Fred. Cook, (Rebus pretty good, but too difficult), Kate E. Davison, "Beulah," Mary Esther, Mary Eva Haggerty, Lila J. Chapman, Marshall T. Bryan, Frank R. Conger, Aaron E. Frost, Werdna Nohiff, D. B. Vanyckel; H. Slater, and others coming in.

"SHOO!—GO AWAY!"—*(Engraved for the American Agriculturist.)*

No wonder the little fellow seen in the engraving is in trouble. He has begun to experience what all will find to be true, that even prosperity has its difficulties. The fowls that cared little for him before he became proprietor of that tempting slice of bread and butter, are now more attentive than is pleasant. Should he unfortunately drop it, they stand ready to snatch it away, and the rooster, more bold than the rest, seems meditating on the chances of success in making a direct attack to secure the coveted prize. Just so he will find it in older life. Success always causes envy, and this alienates friends and raises up enemies.

That Unfortunate "H."

Many amusing mistakes and ludicrous sentences have been made by the wrong use of the letter *H*, so common among the natives of some parts of England. They omit it where we use it, and use it where we do not. Here are two or three. The first we find in an exchange. The proprietor of a saloon in our neighborhood applied to an English sign painter to letter his window. Before commencing, the painter was asked, "can you spell *saloon*?" "Certainly," was the reply; "s-hay-bell, two hoes, and a hen." This would make quite a rebus if pictured out.

An English servant girl in the family of one of the editors of the *Agriculturist*, once proposed the following puzzle to one of the children: "What does two hens, two hoes, a bell, and a d spell. The child stood amazed that the girl should "say a naughty word," as she told her mother. The girl being asked for an explanation, said the word was "London," which you see is made up of the letters two *n*'s, two *o*'s, an *L*, and a *d*: the unfortunate *h*, was the cause of the "naughty word."

We recently heard a still more ludicrous instance during a sermon by an English minister. He was noticing the fact that man has two different orders of faculties, the mental and the moral. "Thus," said he, "for illustration, man may be compared to a double louse;" at least it sounded so to his hearers. He intended to say a double house, but unfortunately dropped the h, and ran the two words together, making sad work with his illustration.

A Sharp Newsboy.

Not long since a military officer was waiting at a Depot for the arrival of a train of cars. The newsboys soon discovered that he had no morning paper, and swarmed around him like flies, teasing him to "Buy the Sun—Times—Tribune?" He drove them all away but one, who was determined to sell him at least one paper. As a last resort, the officer cried out "I can't read a word, I tell you—so be off!" "Can't read, eh?" replied the news boy looking quizzically at him, "well now old feller, I'll fix yer: 'ere's a Illustrated News, or a *American Agriculturist*. Just look at the pickers! You needn't read a word; them pickers speak to the commonest understanding." The officer could stand it no longer, and bought half a dozen papers as a reward for the boy's ingenuity.

A Trick of the "Bogie."

In Great Britain the custom prevails of celebrating the evening before "All Saints Day," (Nov. 1st) by various games and amusements. Some superstitious people believe that on that evening—called Halloween, or All-Hallows—spirits, both good and bad, or fairies and bogies, as they are termed, are particularly active in bestowing good gifts, or in playing pranks upon mortals. Among other games played on Halloween is one called "bobbing for apples." A tub filled with water is placed upon the floor, and a few large apples are put in it, which float upon the surface. The company endeavor to get a bite from the apples without touching them with the hands. This causes great sport, as in their eagerness, they frequently get a ducking instead of an apple. The custom is kept up by some families coming here. Last Halloween the children of a neighbor of the writer, were engaged in this play, in which Bridget the servant girl joined them. After several failures she made a desperate grab, but immediately raised her head with a cry of distress, and to the astonishment of the company remained with her mouth wide open, unable to close it or to utter a word. Poor girl: she was sure the "bogie" had played her a trick, and she was in the utmost alarm. The father of the family hearing the cry, examined her face and found that in bobbing at the apple she had opened her mouth so wide as to dislocate her jaw, and a surgeon was necessary to replace it. The girl, however, was not easily convinced that the "bogie" had not played her a trick, and nothing could now tempt her to bob for apples.

The Successful Mechanic.

Many years ago a young man, a house painter by trade, went to Savannah to start in business for himself. He took a shop, hung out his sign, and looked for customers; but none came. There appeared to be painters enough in the place already, and his prospects looked dark. What should he do? Give it up, return to the North, and work as journeyman again? He was not that kind of man. If customers would not come to him, he would go to them. Early one morning, with over-alls on, and paint pot and brushes in hand, all ready for work, he started out, and walked briskly through the principal streets as though in haste to commence a day's work—which indeed he was. Presently a gentleman stopped him with, "I see you are a painter." "Yes sir."

"Do you do business on your own account?" "Yes sir." "What can you do for me?" Most men would have answered "right away," but our friend was more shrewd, and replied, "Probably in a week or so."

"But I want it done immediately."—"I would like to accommodate you, and will try to; I will send a man by day after to-morrow, or I will come myself."

Of course he went himself, and found a long and profitable job on the gentleman's plantation, which he completed so well that others noticed it, and were glad to employ him; and in a short time he was at the head of the largest business of the kind in Savannah. He has since changed his business, and were we permitted to name him, he would be at once recognized as the Principal of one of the most important manufacturing establishments in this country. Remember, boys, that he owed his success to *perseverance, shrewdness* (not cunning, but careful thought), and *faithfulness*.

A Farmer Happier than a President.

No doubt many of our young readers suppose a Governor must be a happy man, and a President, one of the happiest, if not the most so of any man living. Here is the opinion of one who had filled both positions, expressed in his last will and testament, where men are supposed to speak their honest convictions. "I, Martin Van Buren, of the town of Kinderhook, heretofore Governor of this State, and more recently President of the United States, in the last and happiest year of my life, *a farmer in my native town*, do make and declare the following to be my last will and testament, etc." So thought Washington, Jefferson, Harrison, and multitudes of other great men, who could judge from actual experience as farmers.

Will You be an Agent?

The Publisher desires to secure the best special agent for the *Agriculturist* in every town and neighborhood. Judging from the fact that it is very hard for himself to say no to a proper request from a good child, he thinks the most successful agents will be his young readers, and he hereby commissions every boy and every girl who receives this, to act as a *special agent* to tell others what the *Agriculturist* is, and to invite them to take it. We can not this year afford much commission, (printing paper is too high) but we offer some good premiums to those who get large clubs. Those who do not get a club large enough to secure a premium, we will try to repay for their efforts by sending them just as many good things as we can crowd into the pages of the paper. We will try to give you some hints that will be worth more in after life than bags of gold; and not forget to put in many interesting stories, pictures, puzzles, etc. Will you please to accept the agency, and procure one, two, three, or more new readers? We believe you will gladly do so, and tender our thanks in advance. Who will speak out first, who second, who third?—all may speak together. A little practice in the art of persuasion will be useful. It is a good thing to be able to argue well. Try a pleasant argument with that neighbor who has not hitherto been convinced that it would do him and his family good to read such a paper as the *American Agriculturist*.

PREMIUM LIST,

For 1863---Volume XXII.

Good Pay to Voluntary Agents who attend to Collecting and forwarding Clubs of Subscribers to the American Agriculturist.

(Premiums open to all who Desire them.)

Every subscriber is invited to renew his own subscription, and to solicit others to subscribe. But to all those who will take the trouble to collect and forward CLUBS of subscribers, we offer a remuneration in the form of *first-rate* articles, as named below. (The pay thus offered is much larger than we could pay in cash, as we get these articles on extra good terms when *for premiums.*)

☞ WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand things, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞ *We make no distinction between new and old subscribers* in giving these premiums, but it is expected that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞ Every person collecting names for premiums, should send the names of each list of names—one of them marked "For Premiums," and also with the name of the sender.

☞ Every person collecting names for premiums, should send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; Two copies of each list of names should be sent—one of them marked at the top "For Premiums," and also with the name of the sender. The premium will be paid as soon as any club is made up—if duplicate lists are sent.

☞ Any person who has commenced sending in names at 80c. and finally fails to get the higher number of names, can fall back upon the smaller number, by remitting 20 cents extra on each of the smaller number of names required.

☞ Clubs need not be all confined to one Post Office.

Table of Premiums for 1863.

Names of Premium Articles.	Price of Premiums.	Names at $1 each.	Names at 80 cents each.
1—Good Books—*See terms below*			
2—Best Family Clothes Wringer.....	$7 50	18	37
3—Improved Washing Machine.....	$4 50	10	23
4—Sewing Machine, (Wheeler & Wilson)	$15 00	60	130
5—Sewing Machine, (Wilcox & Gibbs)	$15 00	60	130
6—Aneroid Barometer.....	$7 50	18	44
7—The Aquarius.....	$10 00	30	63
8—Five Octave Melodeon (best)	$75 00	125	237
9—Six Octave Melodeon (best)	$60 00	104	182
10—Four Octave Melodeon (best)	$45 00	70	130
12—Worcester's *Unabridged* Dictionary.....	$7 50	18	40
13—Six back Volumes Agriculturist,	$1 50	3	6
14—Five do do do	$6 00	16	39
15—Four do do do	$4 50	13	26
16—Three do do do	$3 00	10	20
17—Two do do do	$2 24	...	15
18—One do do do	$1 12	...	10
19—Jacob's Portfolio Paper File	$1 50	...	11
21—Windsor & Newton's Paints	$2 50	...	29
22—Osborn & Hodgkinson's Paints.....	$1 25	...	15
23—Premium Cylinder Plow.....	$10 00	30	65
24—Eagle Plow No. 20.....	$9 25	28	62
25—Hay and Straw Cutter (best).....	$8 00	26	58
26—Steel-tooth Cultivator (best).....	$7 50	24	51
26—Family Lard and Wire Press.....	$3 00	21	55

DESCRIPTION OF THE PREMIUMS.

Premium No. 1—Good Books.

Any person sending 16 or more subscribers, may select from our book list, (page 376,) to the amount of 12½ *cents for each name, at the club price of 80 cents, or to the amount of* 33⅓ *cents for each name, at* $1 *each.* Farmers' Clubs have frequently joined together and obtained a good library through these premiums. N. B.—The books will be *delivered* to the recipients, (by mail or express,) *free of all cost.*

No. 2—Family Clothes-Wringer.

This is a first-rate household implement—a great saver of garments, and of hard work. With this machine set on the edge of the wash-tub, the garments are easily and rapidly passed between two India-rubber rollers, the water falling back into the tub, and the garments dropping into a basket, in a drier condition than can be wrung by hand, and therefore more quickly dried on the line. A child can in a few minutes wring out a tubful of clothes. We have had one in constant use in our family for nearly three years, and it is still as good as new. The machine offered, No. 2, is just the thing for family use. It is provided with cogs to move the rollers together, so that it is not possible to tear garments, as is the case with cheaper Wringers not provided with cogs. We present one of these No. 2 Wringers to any person procuring and forwarding 18 subscribers at $1 each, or 37 at the lowest club price, (80 cents each.)

Premium No. 3—Best Washing Machine.

The **Nonpareil Washing Machine** we have had in use in our family for nearly a year past, and it has not only driven out half-a-dozen placed there on trial, but has really gives excellent satisfaction. It is the only machine, out of twenty we have tried, which the "help" cheerfully use without compulsion. It is a labor-saver and a clothes-savcr—two important considerations. (See descriptive cut, and advertisement on page 318.) The clothes are put in, in quantity, and quickly washed by simply turning a crank. The balance-wheel adjusts the force required, so as to make the turning easy. Take it all in all, it is the best Washing Machine we know of, and is worthy of a place in every family. They are of three sizes; we select No. 2, as the best size for common family use. The price of No. 2 is $7.50. This machine will be present to any one forwarding 30 subscribers at the regular price, ($1 each,) or 70 subscribers at the lowest club price, (80 cents.) The machine can be sent to any point as freight, or by express, and will be forwarded, free of all expense, except the freight after leaving the city

Premium No. 4—Sewing Machine.

90 Subscribers at $1 each, (or 130 at 80 cents each,) will entitle the person sending them to **Wheeler & Wilson's best $45 Sewing Machine,** (including **Hemmer**), new from the factory, and of the very best make. There is no better family machine than this made, as we have used it nearly *five years'* use in our own family, in connection with other machines. We want no better. The terms on which it is offered are, with stable many families we are sure one without direct outlay of money. The Premium Machines will be selected new at the manufactory, and will be forwarded, well boxed, with full directions for setting up and using, and with no expense, except for freight.

Premium No. 5—Sewing Machine.

60 Subscribers at $1 each, (or 98 at 80 cents each,) will entitle the person procuring them to **Wilcox & Gibbs' $35 Sewing Machine,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with one thread,) and has several points superior to other machines. It is neat, well made, and in its operation will have the credit of one in our own family for more than two years, we think highly of it, and can recommend it to those who can not afford to buy the higher priced double thread machines. Many of our neighbors think this machine ahead of all others. Premium 5 will be selected and sent the same as No. 4.

Premium No. 6—Barometer.

10 Subscribers at $1 each, (or 14 at 80 cents each,) will entitle the person getting up the club to one **Aneroid's Aneroid Barometer,** (Price $7 50.) This is a good, portable Instrument, and valuable to every person as a weather-glass. See a full and satisfactory notice on page 377, December No. It will save to the farmer and others many times its cost, as a weather-indicator. These instruments resemble a large watch, is inches in diameter, and 2 inches thick. Each one is in a neat leather case, and when sent to a distance, this is packed in cotton, in a wooden box 4½ inches, and can go anywhere, by express or otherwise, with perfect safety.

Premium No. 7—The Aquarius.

This is a capital instrument, valuable to have in every house. It is a portable hand force-pump, which any one can easily set up in a moment's warning, and throw from a pail or other vessel a steady stream of water upon a fire in a house, or elsewhere. It is supplied with both a jet-pipe and a rose, or sprinkling pipe, and can be used for washing windows, carriages, &c.; for sprinkling trees, plants, destroying insects, &c., &c. With it, it is easy to wash the second and third story windows, and to sprinkle and cool the roofs, while standing upon the ground. Such an apparatus will often enable a person to so use a bucket or two of water as to extinguish a fire breaking out where it could not be reached with water dashed on from pails. It is supplied with suction and injection India-rubber pipes, and with air-chambers to keep up a steady stream. The price is $10 00, and it can be sent anywhere as freight, or by express. (Price $16.) We will present an **Aquarius** complete to any one sending us 32 subscribers at $1 each, (or 47 at 80 cents each.)

Premium No. 8—Melodeon.

125 Subscribers at $1 each, (or 237 at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* $75 **Melodeons** (5 octaves). These Melodeons are very superior to most Melodeons. We have ourselves used one for three years past, and it has given the highest satisfaction, and is pronounced by all who have heard it, one of the very best. The different priced instruments are of equally good tone—the price varying with the size and style of finish. The size, prices, etc., of these instruments are clearly learned from their Circulars, sent to any one by Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive catalogue. The instruments given as Premiums, will be sent over directly from the factory at Buffalo, finely boxed, and without expense to the recipient, except for freight. Schools and churches can readily combine their efforts and secure one of these instruments. This has been frequently done. See "N. B," under Premium No. 10.

N. B.—Any higher or lower priced Melodeons will be given for other lists, in the proportion given. See table above.

Premium No. 12—Best Dictionary.

18 Subscribers at $1 each, (or 40 at 80 cts. each,) will entitle the person getting up the club to a copy of the *large Pictorial Unabridged Edition of Worcester's Dictionary,* (Price $7 50.) This now stands confessedly the most valuable Standard Dictionary published. The Dictionary can be called for at any Office, or be sent by Express or otherwise, to any part of the country.

Premiums Nos. 13 to 18—Back Volumes—A First-rate Library.

These premiums (13 to 18,) will enable any one to secure the previous excellent volumes of the *American Agriculturist,* as far back as Volume XVI. These will be sent *postpaid,* in clean, new numbers, each volume by itself, with index. The whole five can be taken together, or one or more copies of any particular volume be selected, as desired. They will be presented as in the table above, viz: For 20 Subscribers at $1 each, (or 37 at 80 cents each,) we will present **six volumes.** For 16 Subscribers at $1 each, (or 30 at 80 cents each,) we will present **five volumes.**—For 13 Subscribers at $1 each, (or 26 at 80 cents each,) **four volumes.**—For 10 Subscribers at $1 each, (or 20 at 80 cents each,) **three volumes.**—For 15 Subscribers at 80 cents each, **two volumes.**—For 10 Subscribers at 80 cents each, **one volume.**—Let every one be careful to name just *which* back volumes are desired.

Premium No. 19—Best File for Agriculturist.

Jacobs' Portfolio File, made just to fit the *Agriculturist*—the name gilded on. This is a leather cover or portfolio, so arranged that successive numbers of the paper can be inserted in a minute, and be properly preserved in book form for reading. When one volume is completed, the sheets can be removed and stitched, and a new volume inserted. A single cover will answer for a dozen successive volumes. It is the most complete file yet made. The price is $1, and the package 20 cents. We will forward it, postpaid, to any one sending *eleven* subscribers, at the lowest club price, (80 cents each.)

Premium No. 20—Paints.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Windsor & Newton's* **Water Color Paints**—consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These Paints are imported from London, and are by us considered the best in the world. They are adapted to the finest work, or they will make a neat and appropriate present to any of our younger readers. They will be sent post-paid any where in the United States within 3000 miles.

Premium No. 21—Paints.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an Assortment of *Osborne & Hodgkinson's* **Water Color Paints,** consisting of 6 colors, and brushes, put up in a neat case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, will answer for practice by children or beginners, and for common sketching. Sent same as No. 20.

Premiums Nos. 22 to 26.

We have not space left to describe these particularly, this month. The Cylinder Plow was described in this journal last year. It is remarkably easy draft. Premium The Eagle Plow is well known, and so is the Hay and Straw Cutter, and the Steel-toothed Cultivator, one of the most useful implements in the farm. The Lard and Wire Press is a very convenient household implement, for pressing out lard or tallow, the juice of grapes, currants, berries, &c. For the price, and subscribers required, see the table above.

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

TERMS—(invariably cash before insertion);

FOR THE ENGLISH EDITION ONLY.

Fifty cents per agate line for each insertion.
One whole column (175 lines), or more, $80 per column.

☞ Business Notices, *Eighty cents* per line of space.

FOR THE GERMAN EDITION ONLY.

Ten cents per line of *space* for each insertion.
One whole column (175 lines), or more, $40 per column.

☞ Business Notices, *twenty cents* per line of space.

Gardener Wanted.

An unmarried man, competent to raise Summer vegetables for market, and to grow the smaller fruits, will have a good situation in Western Massachusetts, at fair wages. If he can make rustic garden work, he may have employment the year round. Address Dr. WM. H. F., Northampton, Mass.

PEACH TREES.

25,000 one-year old from bud, very thrifty and fine, at $50 per thousand. LENK & CO.,
Humboldt Nurseries, Toledo, Ohio.

SEEDS, PITS, STOCKS, TREES, all of the best quality and low prices. Apple and Pear Seeds, Plum, Peach, and Cherry Pits. Stocks of all kinds, worked or not. Trees, Shrubs and Vines, wholesale and retail. Send for Catalogues. E. C. FROST, Highland Nurseries, (P. O.) N.Y.

DUTCH FLOWERING BULBS.

We offer a large selection of *Hyacinths, Tulips,* and *Crocuses,* etc, etc. A Descriptive Catalogue just published, sent gratis to all applicants. LENK & CO.,
Humboldt Nurseries, Toledo, Ohio.

The Adirondac Grape.

The earliest and best American Grape known, ripening two weeks earlier than any other good grape. Pronounced the most delicious flavor, in fact, equal to the most delicate hot-house grape. Is originated at the base of the Adirondac range of mountains on the shore of Lake Champlain. It is believed it possesses all the properties to establish its character as the EARLIEST AND BEST NATIVE GRAPE.

PRICE. One year old vines $3. A limited number of two year old vines at $5. All cut back to 3 or 4 eyes.

Vines will be carefully packed and forwarded by Express or otherwise. Small packages (less than a pound) can be sent by mail, at 50 cents per ounce, to any part of the United States. Address with remittance

JOHN W. BAILEY, Plattsburgh Nurseries.
Plattsburgh, Clinton Co., N. Y., Oct. 8th, 1862.

GRAPES—GRAPES.

Native and Foreign—Wholesale and Retail.—An immense collection, embracing over 500 kinds. Vines of fine and healthy growth. Cheap as the cheapest. Call and examine, or send for Price list. PRINCE & CO., Flushing, N. Y.

Saw Machine,

For sawing wood and slitting boards. Every farmer should have one. Sold by GRIFFING, BROTHER & CO.,
No. 60 Courtlandt-st., New-York.

BUTTER, CHEESE, POULTRY, EGGS, AND FARM PRODUCE

OF ALL KINDS

SOLD ON COMMISSION.

Constantly on hand, for sale, Flour, Fish, Salt, Mackerel, Pork, Hams, Lard, Beans, Dried Fruit, Soap, Starch, etc.

ISAAC EMENS, 226 Front-st., New-York.

Refers to the Editor of the American Agriculturist.
" H. S. Williams, President Market Bank, New-York.

Choice Native and Foreign Grape Vines.

LENK & CO. offer for sale a splendid stock of native and foreign Grape Vines, including all the rarest and most valuable varieties. Send for a Price List.
Humboldt Nurseries, Toledo, Ohio.

FOR SALE.

100 bbls. of Fresh PEACH PITS, delivered at Railroad for $2.50 per bbl. Address DANIEL CONGER,
Nurseryman, Wolcott, Wayne Co., N. Y.

OUR "EXCELSIOR

BURR STONE MILLS,"

AND

ANTI-FRICTION

HORSE POWERS.

Have taken the HIGHEST PREMIUMS WHEREVER EXHIBITED! NINE FIRST PREMIUMS being received from WESTERN STATE FAIRS last year.

THE MILL may be driven by *horse, water, or steam power*, does its work equally as well as the best stone mills in milling establishments, and requires but *one-half the power* to do the same amount of work. They are made in the best manner, and will last *thirty years*, and cost *nothing for repairs*.

THE HORSE-POWER runs upon iron balls, and requires but TWO AND A HALF POUNDS DRAUGHT to keep it in motion. With the same number of horses it will do TWENTY-FIVE PER CENT. MORE WORK than ANY OTHER POWER IN USE.

☞ EVERY MACHINE IS GUARANTEED TO GIVE SATISFACTION, OR THE MONEY WILL BE REFUNDED. ☜

REFERENCES:

Orange Judd, New-York City. P. J. White, Closter, N. J. W. P. Cooper, Philadelphia, Pa. Emery & Co., Chicago, Ill. Geo. Smith, Walnut Creek, O. E. Whitney, Green Bay, Wis.

Liberal discount to dealers.—Agents wanted. State, County, and Shop Rights for sale.
For Circulars and further information address
BENNETT BROTHERS, Patentees,
42 and 44 Greene-st., New-York.

Premium Farm Grist Mill.

Is adapted to one or two horse power.
Grinds all kinds of grain rapidly.
Also grinds Corn in the ear.
Is durable and simple.
SEND FOR DESCRIPTIVE CIRCULAR and address,
WM. L. BOYER & BRO.,
Agricultural Implement Manufacturers,
Philadelphia, Pa.

Horse Powers, Hay Presses, Cider and Wine Presses, etc.

For sale at the lowest market price, by
GRIFFING, BROTHER & CO.,
No. 60 Courtlandt-st., New-York.

THRESHING MACHINES.—Corn Shellers, Cider Mills, Hay and Stalk Cutters, Vegetable Cutters, Grain Mills, Sausage Cutters and Stuffers, Vegetable Boilers, Carts and Waggons, Clothes Washers and Wringers, Hay Presses—of most approved patterns.
JOHN VANDERBILT, 23 Fulton-st., New-York.

CORN SHELLERS, HAY, STRAW, & STALK CUTTERS, VEGETABLE CUTTERS, etc.
Warranted to be the best in the market. Sold at wholesale and retail, by GRIFFING, BROTHER & CO.,
No. 60 Courtlandt-st., New-York.

JONES' PATENT WEIGHTED CORN SHELLER.—The cheapest and best corn sheller ever invented. It works with a weight, instead of a spring, thereby shelling clean, turning easily, and acting on every ear with the same pressure. Farmers who want machines, will find it to their interest to inclose stamp and send for a circular.
Patent rights for sale.
ABRAM H. JONES, Morrisville, Pa.

KEYSTONE CORN STALK CUTTER AND GRINDER. Sold by
GRIFFING, BROTHER & CO.,
No. 60 Courtlandt-st., New-York.

AGRICULTURAL IMPLEMENTS.—Seeds, Fertilizers, and Plants of every variety, at low prices. Purchasers would do well to call on me before buying.
JOHN VANDERBILT, 23 Fulton-st., New-York.

TO FARMERS,

TO DAIRYMEN,

TO COUNTRY MERCHANTS.

ALL who have for Sale:

Fruits, dry and green,	
Butter,	Cheese,
Lard,	Hams,
Eggs,	Poultry,
Game,	Vegetables,
Flour,	Grain,
Seeds,	&c., &c.,

Can have them *well* sold at the highest prices in New-York, with full cash returns always within *Ten Days* of their reaching the City, by forwarding them to the Commission House for Country Produce, of

JOSIAH CARPENTER,
32 Jay-street, New-York.

N. B.—The advertiser has had abundant experience in this business, and trusts that he will continue to merit patronage by the most careful attention to the interest of his patrons. The articles are taken charge of on their arrival, and carefully disposed of promptly to good cash customers, and cash returns made immediately to the owner. (The highest charge made, for receiving and selling is *five per cent.*)

A New York Weekly Price Current is issued by J. Carpenter, which is sent free to all his patrons. A specimen copy sent free to any desiring it. A trial will prove the above facts. For abundant references as to responsibility, integrity, &c., see the "Price Current."

☞ Cash advanced on consignments of Produce.

SEND FOR

A FREE COPY

OF

PRICES CURRENT,

AND ALL OTHER PARTICULARS,

TO

JOSIAH CARPENTER,

32 Jay-st., New-York.

S. B. CONOVER,

260, 261, and 262 West Washington Market, foot of Fulton-st., N. Y.

COMMISSION PRODUCE DEALER.

All kinds of Country Produce sold on Commission. Particular attention paid to the selection of Potatoes for Seed.
Refers to the Editors of the *American Agriculturist*.

NEW-YORK

Agricultural Warehouse,

189 and 191 WATER-ST.

HORSE POWERS, THRESHERS, and WINNOWERS.

CLOVER HULLERS, CORN SHELLERS, GRAIN DRILLS, and FANNING MILLS.

STRAW and HAY CUTTERS—Eureka, Daniel's, Telegraph, and other Corn Stalk Cutters.

HAY PRESSES—Large Size, Dederick's, and other patents.

SAUSAGE CUTTERS and STUFFERS.

LARD PRESSES, VEGETABLE CUTTERS, PLASTER, POUDRETTE,

PATENT CYLINDER PLOWS, the lightest of draft of any in use.

The largest assortment of Agricultural and Horticultural Implements, Seeds, and Fertilizers.

BOOKS FOR FARMERS AND OTHERS.

[Any of the following books can be obtained at the office of the *Agriculturist* at the prices named, or they will be forwarded by mail, *post paid*, on receipt of the price. Other books not named in the list will be procured and sent to subscribers when desired, if the price be forwarded. All of these books may well be procured by any one making up a library. Those we esteem specially valuable, are marked with a *.]

American Bird Fancier	$0 25
American Weeds and Useful Plants*	1 50
Allen on the Culture of the Grape	1 00
Allen's (R. L.) American Farm Book*	1 00
Allen's Diseases of Domestic Animals	75
Allen's (L. F.) Rural Architecture	1 25
Barry's Fruit Garden*	1 25
Bement's (C. N.) Rabbit Fancier	50
Bridgeman's Young Gardener's Assistant*	1 50
Bridgeman's Kitchen Garden Instructor	60
Bridgeman's Florist's Guide	60
Brandt's Age of Horses*	50
Buist's American Flower Garden Directory	1 25
Buist's Family Kitchen Gardener*	75
Chorlton's Grape-Grower's Guide*	60
Dadd's (Geo. H.) Modern Cow Doctor*	1 00
Dadd's (Geo. H.) American Cattle Doctor	1 00
Downing's Cottage Residences	2 00
Downing's Fruits and Fruit Trees of America*	5 00
Downing's Ladies' Flower Garden	1 25
Eastwood on the Cranberry*	50
Every Lady her own Flower Gardener	50
Fessenden's Farm Drainage*	2 00
Field's (Thomas W.) Pear Culture	1 00
Fish Culture*	1 00
Flint (Charles L.) on Grasses*	1 25
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Market Review, Prices, Weather, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Wednesday, Nov. 19, 1862.

1. TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
27 days *this* m'th	536,000	4,520,000	2,692,000	41,100	387,000	785,000
25 days *last* m'th	438,000	5,079,000	3,198,000	95,000	132,500	747,000

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
27 days *this* month	670,000	6,378,000	3,455,000	35,000	361,000
25 days *last* month,	541,000	6,514,000	3,687,000	101,100	94,500

2. *Comparison with same time last year.*

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
27 days 1862......	536,000	4,520,000	2,692,000	41,100	387,000	785,000
27 days 1861......	836,000	7,148,000	3,109,000	119,600	344,000	712,500

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
21 days 1862......	670,000	6,378 000	3,455,000	35,000	361,000
27 days 1861......	795,000	8,998,000	4,521,000	123,300	335,000

3. *Receipts at Tide Water (Albany) from the opening of Navigation to Nov. 14.*

	Flour.	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
1862....	1,413,200	28,609,800	20,164,400	741,700	1,602,400	4,635,900
1861 ...	1,221,200	25,054,700	20,559,600	725,000	1,703,900	4,806,900
1860....	1,051,900	15,777,600	13,409,300	304,500	2,393,000	5,948,600

There are no marked features in the general markets to be noted. The very complete and elaborately prepared tables above, show at a glance the transactions in Breadstuffs as compared with last month, and with last year. Several causes have conspired to depress the prices of wheat and flour. Gold, and consequently foreign exchange, has been lower, giving less margin for profit to shippers, while the demand from Europe has been less active. Weak holders have been scared, and been anxious sellers, which has depressed the market. During several days past, however, there has been a better feeling. and receivers of flour and wheat have held on to their stocks more firmly, while the demand both for shipment abroad and home use has been better. Oats and Barley have advanced materially during the month, as noted in the comparative prices below. They have been scarce, while the home inquiry has been active. Barley, and Barley malt, have reached a price in this market higher than at any previous period within our recollection, and the outlook is fair for a still further advance .... The Cotton market has been quite active, especially within the past two weeks, at decidedly higher rates, leaving the market nearly bare of supplies accessible to purchasers. ....Provisions have been in fair request; but, having been very freely offered, prices of hog products have declined .....Hay and Hops have been in active demand and quoted a shade dearer..... Tobacco has been moderately dealt in at uniform quotations....Wool has been more sought after, and prices have favored sellers ..... Rice has been quiet, in the absence of supplies of desirable lots......The movements in other articles have been of average magnitude .... The changes in the selling rates as compared with last month are indicated below.

CURRENT WHOLESALE PRICES.

	Oct. 18.	Nov. 19.
FLOUR—Super to Extra State	$6 30 @ 7 00	$5 65 @ 6 40
Superfine Western	6 25 @ 6 60	5 65 @ 5 80
Extra Western	6 65 @ 9 00	5 90 @10 00
Extra Genesee	7 05 @ 9 00	6 50 @ 8 50
Super. to Extra Southern	6 75 @ 9 50	6 50 @ 9 75
RYE FLOUR—Fine and Super.	3 25 @ 4 75	4 25 @ 5 75
CORN MEAL	3 50 @ 4 00	3 70 @ 4 25
WHEAT—All kinds of White	1 45 @ 1 65	1 50 @ 1 65
All kinds of Red	1 21 @ 1 46	1 16 @ 1 45
CORN—Yellow	70 @ 72	72 @ 74
White	70 @ 85	72 @ 84
Mixed	61 @ 68	65 @ 71
OATS—Western	56 @ 59	67 @ 69
State	57 @ 60	67 @ 69
RYE	72 @ 84	80 @ 90
BARLEY	1 15 @ 1 25	1 45 @ 1 60
BEANS—Medium and Pea, bu.	2 25 @ 2 50	2 50 @ 3 00
Marrow and Kidney	2 50 @ 2 75	3 00 @ 3 25
HAY, in bales, per 100 lbs	55 @ 70	65 @ 80
COTTON—Middlings, per lb	61 @ 61½	69½@ 70
RICE, per 100 lbs.	6 50 @ 9 00	7 00 @ 9 25
HOPS, crop of 1862, per lb	19 @ 24	18 @ 25
FEATHERS, Live Geese, p. lb.	45 @	38 @ 45
SEED—Clover, per lb	Nominal.	10¼@
Timothy, per bushel	Nominal.	2 00 @
SUGAR—Brown, per lb	8¾@ 11½	9 @ 12
MOLASSES, New-Orleans, p.gl.	40 @ 50	40 @ 50
COFFEE, Rio, per lb	25 @ 27	29 @ 33
TOBACCO—Kentucky, &c, p.lb.	14 @ 30	15 @ 30
Seed Leaf, per lb	14 @ 35	15 @ 35
WOOL—Domestic fleece, p. lb.	52 @ 68	55 @ 70
Domestic, pulled, per lb	50 @ 65	55 @ 68
TALLOW, per lb	12 @ 12¼	11¼@ 11½
OIL CAKE, per tun	40 00 @44 00	41 00 @46 50
PORK—Mess, per bbl	13 90 @14 00	12 87½@13 00
Prime, per bbl	12 37 @12 50	11 50 @
BEEF—Plain mess	12 25 @13 50	12 00 @13 50
LARD, in bbls., per lb	10 @ 11¼	9½@ 10⅛
BUTTER—Western, per lb	16 @ 20	16 @ 20
State, per lb	19 @ 24	21 @ 25
CHEESE	8½@ 11	9 @ 12
Broom Corn—per lb	5 @ 7	5 @ 7
EGGS—Fresh, per dozen	15 @ 16	20 @ 22
Western, per doz	14 @ 15	18 @ 19
POULTRY—Fowls, per lb	10 @ 12	10 @ 12
Ducks, per lb	.. ..	12 @ 14
Geese, per lb	.. ..	11 @ 13
Turkeys, per lb	12 @ 14	13 @ 15
PARTRIDGES, per pair	.. ..	81 @ 87
WILD PIGEONS, per dozen	.. ..	1 75 @ 2 00
WILD DUCKS, per pair	.. ..	50 @ 75
RABBITS, per pair	.. ..	25 @ 31
VENISON, per lb	.. ..	12 @ 14
POTATOES—Common, p. bbl.	1 25 @ 1 50	1 25 @ 1 62
Buckeyes, per bbl	1 25 @ 1 50	1 62 @ 1 75
Peach Blow, per bbl	1 75 @ 1 88	1 62 @ 1 87
Mercers, per bbl	1 75 @ 2 00	2 00 @ 2 37
Sweet Delawares, per bbl	3 00 @ 3 50	2 50 @ 2 75
Sweet Jerseys, per bbl		1 75 @ 2 00
ONIONS, Red & Yellow p. bbl.	1 25 @ 1 38	2 25 @ 2 50
White, per bbl	.. ..	3 00 @
TURNIPS—Rutabagas, p. bbl.	75 @	87 @ 1 00
Marrow Squashes, per bbl	75 @ 87	1 25 @ 1 50
PUMPKINS—Cheese, per 100	.. ..	6 00 @10 00
CABBAGES, per 100	.. ..	3 00 @ 4 00
APPLES, Western, per bbl.	1 50 @ 1 75	1 50 @ 1 75
Apples, River, per bbl	.. ..	1 00 @ 1 25
QUINCES, per bbl	50 @ 1 00	2 50 @ 3 00
CRANBERRIES, Cape Cod, p.b'l	6 00 @ 7 00	11 00 @12 00
Jersey, per bbl.	.. ..	9 00 @11 00
GRAPES—Isabellas, per lb	.. ..	6 @ 10
DRIED APPLES, per lb	.. ..	5¼@ 6
DRIED PLUMS, per lb	.. ..	12 @ 13
DRIED PEACHES, per lb	.. ..	15 @ 18
HICKORY NUTS, per bushel	.. ..	2 00 @ 2 50
CHESTNUTS, per bushel	.. ..	5 00 @ 6 00

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been largely supplied during the past month, the average being 5,485 beeves per week. (The weekly average for all of 1861, was 4,265 head.) The supply has exceeded the demand, and prices have fallen off a little ranging at the last general market, Nov. 18th, from 8¾c. to 9c. per lb., estimated dressed weight, for choice fat cattle; 8c.@8½c. for good animals; 6½c.@7½c. for inferior to medium, and 5c.@6c. for poor thin cows and coarse oxen. Average of all kinds 7¼c. Advanced freights, and limited car room on the railroads, with a general thinning out of N. Y. State cattle, indicate a lighter supply and higher prices, within a few weeks.

Veal Calves.—Receipts 776 per week, which is less than would find ready sales at 5½c.@6c. per lb. live weight for fat calves, and 4c.@5c. for coarse to fair veals

Sheep and Lambs.—Lighter receipts, or an average of only 11,853 per week. Trade is lively at higher prices. Pelts are now selling at about $1.75 each, in lots. Prime fat sheep are worth prices equivalent to 5c.@5¼c. per lb., live weight; poor thin sheep sell at 4c.@4½c.; lambs at 4½c.@5½c.; and are scarce. All kinds find ready sales.

Live Hogs.—Have come in at an average rate of **32,050** per week, which is far ahead of the receipts at this season last year. For the week ending Nov. 12th, the arrivals were 40,662! The packing demand was never better, and the facilities for slaughtering, smoking and barreling are so perfect, that even this large number was all used up during the week and prices suffered no decline. Prime, heavy corn-fed hogs are now worth 4⅞c.@5c. per lb. live weight; medium and light, 4¼c.@4½c.; and still-fed, 3½c.@3¾c., an advance of ½c. during the month. Dressed hogs arrive freely.

The Weather has been changeable during the past month, with considerable rain, a respectable snow storm, but no very cold days, 30° being the lowest point reached by the thermometer.——OUR DAILY NOTES, condensed, read: *October* 19, clear and fine, with rain and wind at night—20, 21, cool and clear—22, cloudy with high wind—23, 24, 25, clear, fine—26, light N. E. rain, increasing to heavy storm at night, 27, hard rain, barometer 29° 30′, the lowest point since last March—28 to 31, clear, fine, warm.——*November* 1 to 4, fine and clear—5, cloudy, rain at night—6, light rain A. M., clear, cool P. M.—7, Northeast snow and rain storm, of 8 inches here, of which 4 inches snow left unmelted—8, cloudy and cool, rain at night—9, melting snow storm—10, 11, clear, cool—12, cloudy, rain at night, snow gone—13, 14, clear, warm—15, 16, fine, but cool, barometer 30°70′, the highest for three years—17, light Northeast rain—18, cloudy—19, light rain.

The Rain Fall and melted snow, for month ending Nov. 15th, 6.13 inches, the greatest of which was 3.40 inches on the 26th and 27th of October. The Barometer has ranged from 29.30 to 30.70 inches, an unusual variation of nearly 1⅜ inches.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.)—*r* indicates rain—*s*, snow.]

OCTOBER.

1..... 60*r*	8......66	14......50	20......46	26......47*r*
2......59*r*	9......65	15......52	21......39	27......47*r*
3 .....62*r*	10......64*r*	16......69	22......54	28......38
4......66	11......58*r*	17......55	23......44	29......41
5......59	12..... 48	18 49	24......36	30......44
6......48	13.. ...48*r*	19......48*r*	25......53	31..... 48
7...... 60	Average ....52°			

NOVEMBER.

1......52	4......37	7......34*s*	10......41	13......49*r*
2......52	5......46	8......32	11... ..36	14......36
3......51	6......36*r*	9......35*s*	12......48*r*	15......40

Fruit Growers' Meetings.

These Meetings, held a the Office of the *American Agriculturist*, at 2 o'clock, P. M. on Thursday of each week, continue to increase in interest and value. Recently there has been much discussion on the question: "What 18 or 20 varieties of Pears are best for those who plant for market as well as for home use—the list to include those which will keep up the longest succession of fruit?" There is considerable difference of opinion in regard to a few of the kinds proposed by different leading growers. The question is to be decided by a vote upon each kind, in a general convocation of as many experienced growers as can be got together. The result and other interesting items from the weekly discussions will be published in our next issue.

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